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United States Department of the Interior  
Bureau of Land Management  
Montana State Office

**FINAL**



United States Department of Agriculture  
Forest Service  
Northern Region

July 1997

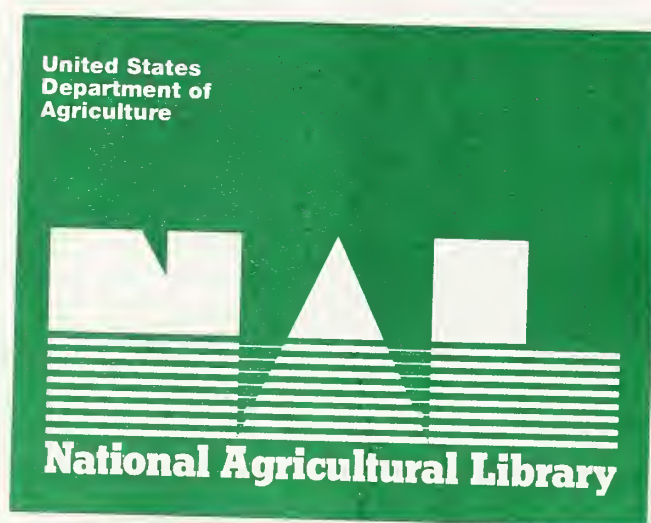
# **SUMMARY OF THE ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED COOKE CITY AREA MINERAL WITHDRAWAL**



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*Cover photo: Republic Mountain, Gallatin National Forest, with Cooke City in the foreground.*





## Cooke City Area Mineral Withdrawal Team

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Dear Reader,

Enclosed for your review is the Summary, and if requested, the Final Environmental Impact Statement (EIS) for the Proposed Cooke City Area Mineral Withdrawal. The Summary provides an overview of the analysis while the Final EIS includes a more detailed analysis of the alternatives considered. The two alternatives analyzed in detail include continued minerals management under the current mining laws (No Action) and the proposed mineral withdrawal of approximately 22,000 acres of National Forest lands near Cooke City, Montana.

During the comment period on the Draft EIS, 208 letters were received. Based on substantive comments raised in these letters, over 100 changes were incorporated into the Purpose and Need, Alternatives, Affected Environment, and Environmental Effects chapters of the EIS. Chapter 4, Consultation and Coordination, has been expanded to include letters from other agencies, state and local governments as well as interdisciplinary team responses to their comments. Appendix I, Public Comment on Draft EIS, summarizes substantive public comments and includes over 200 responses provided by the interdisciplinary team. Other additions include Appendix G, a summary of Montana's Hard-Rock Mining Impact Statutes, and Appendix H, Failure Modes Effects Analysis.

A decision on the mineral withdrawal and forest plan amendments for the Custer and Gallatin National Forests is anticipated in mid to late August, 1997. The Secretary of the Interior is the responsible official for the decision on a mineral withdrawal. Concurrence on a withdrawal decision by the Secretary of Agriculture is required because lands under consideration for withdrawal are administered by the USDA Forest Service. If a mineral withdrawal is approved, the Secretary of Agriculture is the responsible official for Custer and Gallatin National Forest Plan amendment decisions.

After a decision is made, you will receive a copy of the Record of Decision (ROD). The ROD includes the decision and the reasons for the decision. Decisions made at the Secretarial level are not subject to administrative review (i.e. appeals or protests).

Copies of the Summary and Final EIS will be available for review at Bureau of Land Management offices in Billings, Montana, and Cheyenne, Cody and Worland, Wyoming, and at Forest Service offices in the following towns: Billings, Bozeman, Gardiner, Helena, Livingston, Missoula, and Red Lodge, Montana and in Cody and Powell, Wyoming. Copies will also be available at the Cooke City School and at libraries in Billings, Bozeman, Livingston, and Red Lodge, Montana, and in Cody and Powell, Wyoming.

We want to personally thank those of you who have participated in the development of the Cooke City Area Proposed Mineral Withdrawal EIS. Comments received at the public meetings and in letters have provided useful information that helped improve the accuracy and the overall quality of the EIS.

For additional information, please contact Larry Timchak (FS), or John Thompson (BLM), at (406) 255-0322.

Sincerely,

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BLM State Director, Montana

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# PROPOSED COOKE CITY AREA MINERAL WITHDRAWAL FINAL ENVIRONMENTAL IMPACT STATEMENT SUMMARY

SUBSTANTIVE CHANGES BETWEEN THE DRAFT AND FINAL EIS .....	1
PURPOSE AND NEED FOR ACTION .....	1
SUBSTANTIVE CHANGES IN PURPOSE AND NEED FOR ACTION .....	1
INTRODUCTION .....	1
BACKGROUND .....	2
GENERAL LOCATION AND GEOGRAPHIC SETTING .....	2
PROPOSED ACTION .....	2
PURPOSE AND NEED .....	4
Relationship to the NWM Agreement .....	4
SCOPE OF THE ANALYSIS .....	4
DECISIONS TO BE MADE .....	4
Nature of the Withdrawal Decision .....	4
Withdrawal Decision Process .....	5
Forest Plan Amendments .....	5
Decisions Beyond the Scope of this Analysis .....	5
ISSUES AND CONCERNS .....	6
Public Comment .....	6
Issues .....	6
ALTERNATIVES .....	7
SUBSTANTIVE CHANGES IN ALTERNATIVES .....	7
ALTERNATIVES CONSIDERED IN DETAIL .....	7
Alternative A: No Mineral Withdrawal .....	7
Alternative A Scenarios .....	7
Alternative B: Mineral Withdrawal Implemented .....	11
Alternative B Scenarios .....	11
Management Common to All Alternatives .....	11
Preferred Alternative .....	11
ALTERNATIVES ELIMINATED FROM DETAILED STUDY .....	11
AFFECTED ENVIRONMENT AND ENVIRONMENTAL EFFECTS .....	14
SUBSTANTIVE CHANGES TO AFFECTED ENVIRONMENT AND ENVIRONMENTAL EFFECTS .....	14
INTRODUCTION .....	14
Nature of Effects Analysis .....	14
Failure Modes Effects Analysis .....	15
Mining-Related Risk to the Environment .....	15
Use of FMEA in the CCAM Withdrawal EIS .....	15
Reasonably Foreseeable Activities Not Related to Mining .....	15
ISSUES, AFFECTED ENVIRONMENT, AND ENVIRONMENTAL CONSEQUENCES .....	16
Water Quantity and Quality, Wetlands, and Floodplains .....	16
Aquatic Resources .....	17
Recreation, Scenic Integrity, Yellowstone National Park, Special Areas, Air Quality .....	20
Recreation and Scenic Integrity .....	20
Yellowstone National Park .....	20
Wilderness .....	22
Roadless Areas .....	22
Wild and Scenic Rivers .....	25
Air Quality .....	25
Land Uses, Mining, and Private Property .....	28

Economics .....	31
Social .....	31
Cultural .....	34
Wildlife .....	36
CONSULTATION AND COORDINATION .....	39
SUBSTANTIVE CHANGES BETWEEN THE DRAFT AND FINAL EIS .....	39
PUBLIC NOTICES, EXTERNAL AND INTERNAL SCOPING .....	39
CHRONOLOGY OF PUBLIC PARTICIPATION ACTIVITIES .....	39
DISTRIBUTION AND REVIEW OF THE DRAFT EIS AND SUMMARY .....	42
PUBLIC COMMENTS .....	42
Content Analysis Process .....	42
Comment Summary .....	42
Socio-Economic Issues .....	42
Environmental Effects .....	45
The Planning Process and the Proposed Mineral Withdrawal .....	46
DISTRIBUTION OF THE FINAL EIS AND SUMMARY .....	47

## LIST OF MAPS

Map 1	National Forest Lands Proposed for Mineral Withdrawal .....	3
Map 2	Alternative A: No Mineral Withdrawal, Scenario A-1: NWM Agreement Not Implemented .....	9
Map 3	Alternative A: No Mineral Withdrawal, Scenario A-2: NWM Agreement Implemented .....	10
Map 4	Alternative B: Mineral Withdrawal Implemented, Scenario B-1: NWM Agreement Not Implemented .....	12
Map 5	Alternative B: Mineral Withdrawal Implemented, Scenario B-2: NWM Agreement Implemented .....	13
Map 6	Mineral Development Potential .....	30



# **PROPOSED COOKE CITY AREA MINERAL WITHDRAWAL FINAL ENVIRONMENTAL IMPACT STATEMENT**

## **SUMMARY**

### **SUBSTANTIVE CHANGES BETWEEN THE DRAFT AND FINAL EIS**

During the comment period on the Draft EIS, 208 letters were received. Based on substantive comments raised in these letters, over 100 changes were incorporated into the Purpose and Need, Alternatives, Affected Environment, and Environmental Effects chapters of the EIS. Chapter 4, Consultation and Coordination, of the Final EIS includes letters and responses from other agencies, state and local governments. Appendix I presents a listing of the substantive public comments and includes over 200 responses provided by the interdisciplinary team. Other additions to the EIS include Appendix G, a summary of "Montana's Hard-Rock Mining Impact Statutes," and Appendix H, "Failure Modes and Effects Analysis."

Where they relate to this "Summary," the changes to the EIS are noted and have been incorporated. Chapter 4 of this document also provides a brief overview of the comments received from the public.

### **PURPOSE AND NEED FOR ACTION**

#### **SUBSTANTIVE CHANGES IN PURPOSE AND NEED FOR ACTION**

A discussion on the General Mining Law of 1872 and a sentence addressing the likelihood of new mining claims being filed if the area is reopened to mineral entry have been added to the "Background" section.

The discussion of the role of Congress in an administrative mineral withdrawal has been expanded.

A sentence has been changed to indicate the Secretary of Agriculture would amend Forest Plans to reflect the change in management of locatable and leasable hardrock minerals, if the withdrawal is approved.

The role of the Secretary of Agriculture in relation to the mineral withdrawal decision is clarified.

The following actions have added to those already listed as being beyond the scope of this analysis:

- designation of Wilderness or a National Recreation Area
- completion of the New World Project Environmental Analysis
- correlation of the timing of the mineral withdrawal decision with the outcome of the New World Mine Agreement.
- acquisition of private land within the study area
- decisions about travel management
- determination of the validity of unpatented mining claims

### **INTRODUCTION**

This Summary provides an "overview" of the potential environmental consequences of implementing various alternatives for managing federal locatable and leasable hardrock mineral resources on National Forest System lands near Cooke City, Montana. While much of the detail presented in the Final Environmental Impact Statement (EIS) for the Cooke City Area Mineral Withdrawal (CCAMW) has been omitted to produce this document, the Summary is meant to provide the reader with sufficient information to understand:

- What the proposed mineral withdrawal would do and why it has been proposed;
- What alternatives to the withdrawal have been considered;
- What the setting is like and what resource uses and conditions are present in the proposed withdrawal area; and
- What changes or risks of change in existing environmental conditions, resources, or uses may occur as a result of implementing the proposed action or the alternatives considered in detail in the analysis.

The USDA Forest Service (FS) and the USDI Bureau of Land Management (BLM) are co-lead agencies responsible for preparation of the EIS. The Secretary of the Interior will use the information in this Final EIS (FEIS) as the basis for a decision on future management of the federal mineral resource.

## BACKGROUND

The General Mining Law of 1872 (1872 Mining Law) is the basis for appropriation of hardrock mineral resources from public lands. According to the Mining Law, all public lands that are not specifically excluded from availability are open and available for mineral exploration and development. A mineral withdrawal is a formal order that withholds federal lands and minerals from entry under the 1872 Mining Law. It closes an area to mineral location (staking mining claims) and development. Withdrawals are implemented to limit mineral-related activities in order to maintain other resource values in the area (43 Code of Federal Regulations (CFR) 2310).

On August 25, 1995, President Clinton toured the site of the then-proposed New World Project near Cooke City, Montana, and expressed concerns about potential effects of mining on the area's outstanding natural resources. Following that tour, the President declared a two-year moratorium on any new mining claims within the area. The two-year period provides time for the lead agencies to complete an environmental study of a longer term mineral withdrawal.

The petition to pursue a mineral withdrawal was approved by the Secretary of the Interior on August 28, 1995. The "Notice of Proposed Withdrawal" was published in the *Federal Register* on September 1, 1995, at which time the two-year moratorium on new claims went into effect.

The proposed mineral withdrawal was amended on September 16, 1996, in response to the New World Mine (NWM) Agreement of August 12, 1996. The NWM

Agreement between the United States, Crown Butte Mines, Inc. (Crown Butte), and the Greater Yellowstone Coalition, provides for cessation of the permit application process for the proposed New World Project, and acquisition (by exchange) of property interests held by Crown Butte in the New World Mining District. The proposed mineral withdrawal (which originally applied to 19,100 acres of federal land), was expanded to include: 1) an additional 2,960 acres of National Forest in the Kersey Lake area, 2) any lands or minerals acquired in the area in the future by the U.S., and 3) leasable hardrock minerals. The Kersey Lake addition was also made in response to public concerns expressed in the initial stages of scoping for the proposed withdrawal.

Unless a mineral withdrawal is approved by the Secretary of the Interior by August 31, 1997, federal lands within the area will reopen to filing of new mining claims. Filing of additional claims at that time is likely.

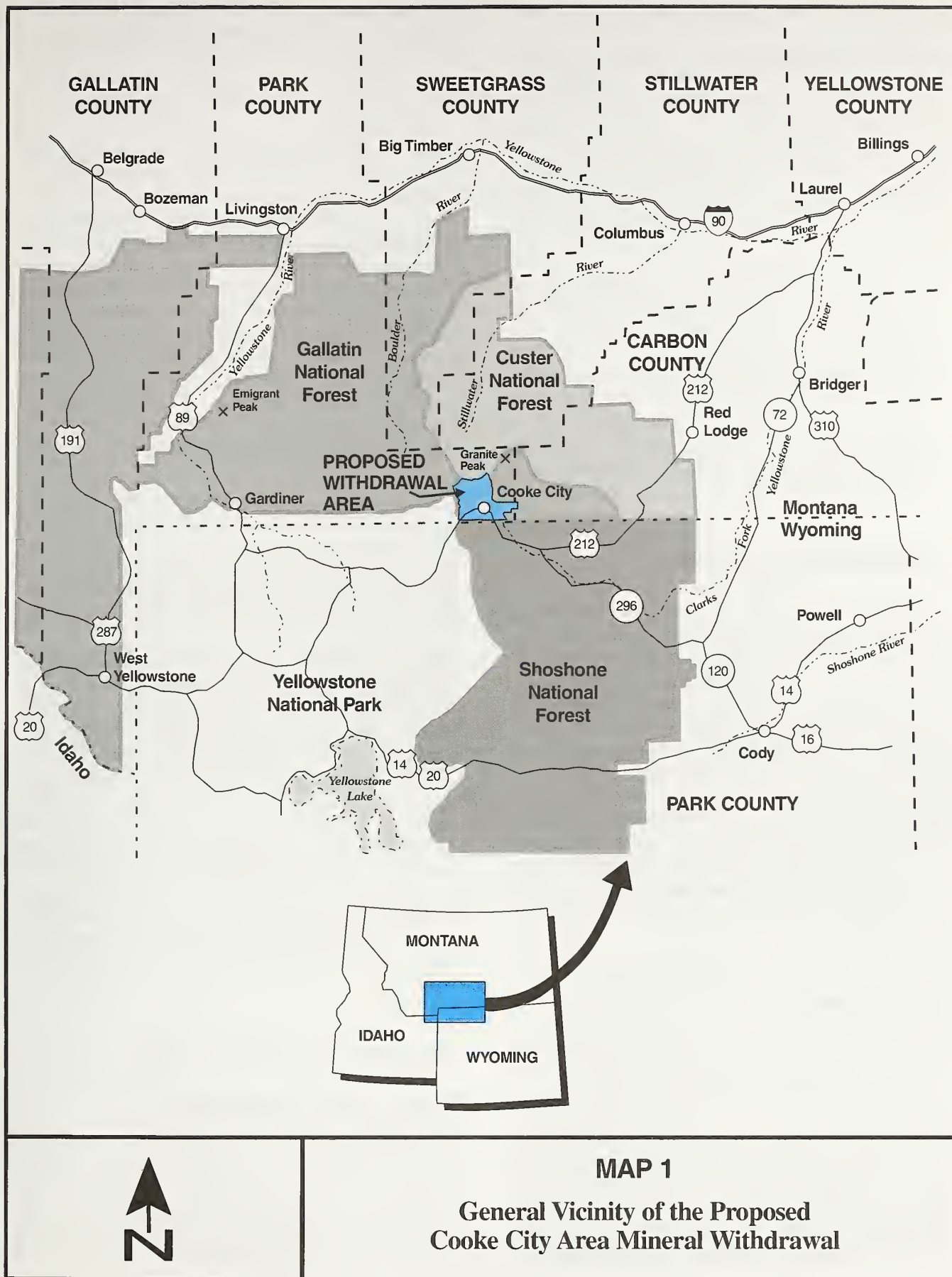
## GENERAL LOCATION AND GEOGRAPHIC SETTING

The proposed mineral withdrawal area (study area) is located in the Gallatin and the Custer National Forests near Cooke City, Montana (Map 1). The study area is adjacent to the northeast corner of Yellowstone National Park (NP), Wyoming, and is bordered on the west, north, and east by the Absaroka-Beartooth (A-B) Wilderness in Montana. The state boundary between Montana and Wyoming forms the southern boundary of the study area. Adjacent to the southern boundary is the North Absaroka Wilderness and a non-wilderness corridor along US 212 and the Clarks Fork of the Yellowstone (Clarks Fork) River. Portions of the headwaters of three rivers - the Clarks Fork, the Stillwater, and the Lamar (via Soda Butte Creek) - originate in the study area.

The study area comprises approximately 26,160 acres of both private and federal lands. Of this, about 22,000 acres are National Forest administered lands on the Custer and Gallatin National Forests. Scattered throughout the area are about 4,160 acres of private land consisting primarily of patented mining claims. Prior to September 1, 1995, there were 470 unpatented mining claims filed in the area.

## PROPOSED ACTION

The Department of the Interior proposes to withdraw from locatable hardrock mineral entry National Forest System lands near Cooke City, Montana. The proposed mineral withdrawal is for up to 22,000 acres of federal lands, subject to valid existing rights associated with the existing unpat-





ented mining claims in the study area. The withdrawal would have an immediate effect on 17,760 acres of currently unclaimed federal land. The mineral withdrawal may or may not affect the remaining acreage (approximately 4,240 acres of unpatented mining claims), depending upon valid existing rights. If these unpatented mining claims were abandoned or determined to be invalid, the mineral withdrawal would limit mineral-related activities at that time. The mineral withdrawal would be subject to review at the end of 20 years according to federal regulations.

Any private minerals in the study area that may be acquired by the United States would also be subject to the proposed mineral withdrawal. For example, if the U.S. were to acquire minerals in this area as a result of the NWM Agreement, these minerals would be withdrawn from mineral entry under the General Mining Law of 1872 (30 United States Code (USC) 21-54). In addition, any acquired minerals would be withdrawn from hardrock mineral leasing under the Acquired Lands Mineral Leasing Act of 1947 (30 USC 351-359).

## PURPOSE AND NEED

President Clinton expressed concern about the effects of mining on the area's outstanding natural resources. The primary purpose of the proposed mineral withdrawal is to protect water quality and fresh water fishery resources within the watersheds of Soda Butte Creek, Clarks Fork River, and Stillwater River from the effects of potential future hardrock mining activities that could occur on federal lands in the headwaters of these streams.

Based on public comments received during the initial stages of scoping, other identified reasons for the withdrawal include protection of surrounding wilderness areas, scenic integrity, recreation opportunities, cultural resources, and wildlife from the effects of mining activity that could occur on federal lands in the study area.

The study area includes the headwaters of Outstanding Natural Resource Waters, including streams which flow through Yellowstone NP and wilderness areas. Portions of the Clarks Fork and Stillwater Rivers and Soda Butte Creek are either designated or eligible Wild and Scenic Rivers. Certain mining-related activities pose risks to these watersheds. These risks include the potential for increased acid-rock drainage, the potential for ground-water contamination from underground mines, the potential for failure of tailings impoundments and the uncertainty of mitigating effects to wetlands. Withdrawal of these lands would help ensure that the physical and biological integrity of these important downstream watersheds is maintained. The risks

and uncertainties associated with mining-related activities on federal lands would be reduced.

## Relationship to the NWM Agreement

The proposed mineral withdrawal would help achieve the objectives of the NWM Agreement by precluding mineral development on property interests in the area acquired from Crown Butte. Under the terms of the NWM Agreement, private minerals and unpatented mining claims controlled by Crown Butte would transfer to federal ownership. In the absence of a mineral withdrawal, these property interests may remain available for mineral entry or mineral leasing. The mineral withdrawal, in concert with the NWM Agreement, ensures that mining would not occur on any acquired interests.

## SCOPE OF THE ANALYSIS

This Summary describes the potential environmental consequences of two alternative strategies for management of federal mineral resources; No Action (no mineral withdrawal) and the Proposed Action (mineral withdrawal). Several additional alternatives were identified and considered during public scoping but were not analyzed in detail.

The proposed CCAMW and the NWM Agreement are not considered connected actions in that either action could proceed independent of the other (36 CFR 1508.25(a)). However, the extent of mineral estate withdrawn from mineral entry varies depending upon whether or not the NWM Agreement is implemented. While the NWM Agreement is a reasonably foreseeable action, there are 6-month, 12-month, and 18-month cancellation clauses in the Agreement that could result in the termination of the Agreement at the end of those periods. Therefore, each alternative is evaluated assuming two scenarios - the NWM Agreement is implemented and the NWM Agreement is **not** implemented. This provides for disclosure of the effects of a mineral withdrawal regardless of the outcome of the NWM Agreement.

## DECISIONS TO BE MADE

### Nature of the Withdrawal Decision

The mineral withdrawal analysis focuses on a policy level decision concerning the appropriateness of future mining on federal lands in the study area considering other public values present. This policy level decision differs from the decision made for a site-specific project, such as the New



World Mine Plan of Operations. By nature, the project level decision focuses on alternatives designed to resolve resource issues and mitigate effects of a specific project, rather than addressing the policy level issue of whether or not mining should occur in the area.

## Withdrawal Decision Process

The authority to withdraw lands from mineral entry lies with the Department of the Interior. The Secretary of the Interior will decide which lands, if any, to withdraw, and for how long. The Secretary is limited to a maximum withdrawal period of 20 years (Federal Land Management Policy Act (FLPMA) 204 (c)(1)). If a withdrawal of over 5,000 acres is approved, the Secretary of the Interior would advise Congress of the withdrawal action being taken. No action is required by Congress to implement a mineral withdrawal. Congress can terminate a withdrawal with a concurrent resolution from the House and Senate within 90 days of the approval of the Public Land Order. At the end of the 20 year period, the withdrawal decision would be reviewed to determine if it is appropriate to extend it.

The Montana State Director, BLM, will submit a recommendation to the Director of the Bureau of Land Management. The recommendation and supporting documentation will then be forwarded to the Secretary of the Interior for a decision. If the Secretary chooses to implement a withdrawal, the withdrawal would become effective on the date the Public Land Order is published in the *Federal Register*. Concurrence on a withdrawal decision by the Secretary of Agriculture is required, because lands under consideration for withdrawal are administered by the USDA Forest Service.

## Forest Plan Amendments

If the withdrawal is approved, the Secretary of Agriculture would amend the Custer and Gallatin National Forest Plans to reflect the change in management of locatable and leasable hardrock minerals. Appendix D of the Gallatin Forest Plan and Appendix IV of the Custer Forest Plan would be amended to include the mineral withdrawal. In addition, the Gallatin Forest Plan would be amended to reallocate Management Area 24, (minerals emphasis) to Management Area 15 (grizzly bear/dispersed recreation emphasis). The decision on Forest Plan amendments would be concurrent with the Secretary of the Interior's withdrawal decision.

## Decisions Beyond the Scope of this Analysis

The proposed mineral withdrawal does not apply to the following:

- private lands or use thereof,
- valid existing rights associated with existing unpatented mining claims, fluid leasable minerals (e.g., oil, gas, geothermal), saleable minerals (sand and gravel),
- rights-of-way,
- ingress or egress to existing patented and unpatented mining claims adjacent to or in the vicinity of the lands to be withdrawn, or
- any other authorized, non-mineral related surface uses (including logging, hunting, vehicle use, recreation) on lands under the administration of the Custer and Gallatin National Forests.

In addition, the following actions, suggested in public comments on the Draft EIS, are beyond the scope of the analysis for the mineral withdrawal proposal:

- Designation of the area as Wilderness or as a National Recreation Area (Such designation requires Congressional Action.);
- completion of the New World Project Environmental Analysis (The analysis was halted as a condition of the August 12, 1996 New World Mine Agreement. Crown Butte Mines Inc., the project proponent who was financing the preparation of the EIS, was a party to the Agreement. If the NWM Agreement is terminated, Crown Butte Mines Inc. could reinstate their application and restart the NWPEIS.);
- deferring a decision on the mineral withdrawal until the outcome of the New World Mine Agreement is known (The Secretary of the Interior has the option of deferring a decision, or selecting a partial withdrawal that retains siting options for future mines.);
- Federal acquisition of private land within the study area;
- Travel management decisions on road, trail and area motorized use within the study area (Such decisions are made at the District or Forest level using appropriate public involvement and environmental documentation.); and
- determining the validity of unpatented mining claims, should the mineral withdrawal be approved.

The NWM Agreement provides for acquisition by the U.S. of private minerals and unpatented mining claims held by Crown Butte Mines, Inc. (Crown Butte). The decision to exchange property interests and any subsequent environmental analysis that may be necessary to implement this agreement is beyond the scope of this analysis.

If the NWM Agreement is not implemented, the permitting process for the New World Project could resume. The decision to approve a plan of operations or associated permits for the New World Project is distinct and separate from the decision to withdraw approximately 22,000 acres of federal land from mineral entry.

## ISSUES AND CONCERNS

### Public Comment

The setting in which the proposed New World mine and the proposed mineral withdrawal occur contributes to the breadth and intensity of public opinion about future minerals management in this area. Comments received during scoping addressed what the public perceives as nationally and internationally recognized resources in and around the study area. The resources mentioned in public comments include:

Absaroka-Beartooth Wilderness  
Threatened, Endangered, Sensitive Species  
Chief Joseph Scenic Byway  
Abundant recreation opportunities  
Charm of gateway communities  
Remoteness and solitude of area  
Clarks Fork of the Yellowstone Wild River  
Eligible Wild and Scenic Rivers-Soda Butte Cr.,  
Stillwater River  
North Absaroka Wilderness  
Beartooth Scenic Byway  
New World Historic District  
Wetlands  
High mineral potential, New World Mining District  
High scenic integrity  
Four roadless areas  
Yellowstone National Park (World Heritage Site,  
Biosphere Reserve)

While neither the proposed withdrawal action nor the New World Mine Project is proposed within Yellowstone NP, there is, as indicated in many of the comment letters, a strong attachment between the Cooke City-Silver Gate, MT, area and the Park. Numerous letters addressed the "high quality" of the outdoor experience currently offered in the Cooke City-Silver Gate area. Some indicated that the area plays a role in "rounding out" the "Yellowstone experience," by providing spectacular country much like that found in the Park, but where there are fewer restrictions on travel and use. There was concern expressed about the potential impacts of mining on the tourism-dependent economies of Cooke City and Silver Gate.

Other commenters were similarly strong in voicing their concern about "locking out" mineral development in the Cooke City area. They commented on the high potential for mineral occurrence, discovery, and development, as evidenced by the mining of gold, silver, copper, and other important minerals that has occurred in the area since the late 1800's. They also pointed out the economic benefits to the local and State economy and the importance of the jobs that would be provided by mining in the area.

### Issues

The following Issues were identified through scoping meetings and from a content analysis of approximately 190 letters received from individuals, organizations, and agencies during the scoping period:

**Water Quality and Quantity** - What is the potential for the proposed mineral withdrawal to maintain surface and ground water quantity and quality?

**Wetlands** - What is the potential for the proposed mineral withdrawal to protect and maintain the amount, function, and values of wetlands and waters of the U.S. that could otherwise be affected by mining?

**Aquatics** - What is the potential for the proposed mineral withdrawal to protect, maintain or improve habitat for fish and other aquatic life that could otherwise be affected by mining?

**Recreation, Yellowstone National Park, and Special Areas** - What is the potential for the proposed mineral withdrawal to protect scenic, aesthetic, and recreation values within the study area and in the adjacent Yellowstone National Park, Absaroka-Beartooth Wilderness, the North Absaroka Wilderness, and designated and eligible wild and scenic rivers from the effects of mining?

**Land Use** - What is the potential for the proposed mineral withdrawal to affect uses of private land, unpatented mining claims, and future mining including the New World mine? How does the mineral withdrawal affect the availability of minerals in the study area?

**Economics** - What are the economic implications of the proposed mineral withdrawal?

**Social** - What is the potential for the proposed mineral withdrawal to preclude changes in population, in the need for additional housing and services, and to the overall quality of life that may result from mining?



**Cultural** - What is the potential for the proposed mineral withdrawal to protect the area's cultural resources that could otherwise be affected by mining?

**Wildlife** - What is the potential for the proposed mineral withdrawal to protect or maintain wildlife habitat, particularly grizzly bear habitat and populations that could otherwise be affected by mining?



*Daisy Pass, flanked by Crown Butte (right) and Fisher Peak (left).*

## ALTERNATIVES

### SUBSTANTIVE CHANGES IN ALTERNATIVES

Additional alternatives were considered but not analyzed in detail. These are described in the section on Alternatives Eliminated from Detailed Study. A brief explanation of why they were eliminated from detailed study is also included.

### ALTERNATIVES CONSIDERED IN DETAIL

The alternatives considered in detail represent two different options for the management of hardrock mineral resources on federal lands. While only two alternatives are evaluated in this EIS, the effects of each alternative—in terms of lands available or closed to mining—varies depending on the status of the New World Mine Agreement. Therefore, each alternative is evaluated using two Scenarios: the first Scenario assumes the NWM Agreement is **not** implemented, and the second Scenario assumes the NWM Agreement is implemented.

The effects analysis (discussed later) depends on assumptions outlined in the mineral “forecast” for each alternative

Scenario. The amount of mineral development in each Scenario’s “forecast” varies depending on existing geologic data and the economic and practical feasibility of mine development. It is important to remember this “forecast” is speculative. It represents an estimate of possible activity and is used **only** to compare possible consequences to the area resources under each Scenario. Aside from the Scenarios that include construction of the proposed New World Project, the “forecast” **does not** depict where or how much activity that **will** actually take place. Table 1 displays the status of the mineral estate for each alternative Scenario.

### Alternative A: No Mineral Withdrawal

This alternative is referred to as the “No Action” Alternative because no action would be taken by the Secretary of the Interior to withdraw the area from mineral location and entry. It would continue the federal minerals management that existed prior to September 1, 1995, when the study area was closed to location of new mining claims for a two-year period.

Under Alternative A, federal lands (approximately 22,000 acres) would remain open and available for mineral exploration and development under the 1872 Mining Law. Upon discovery, mining claims could be located for minerals considered to be “locatable” (such as gold, copper, silver, lead, zinc, and platinum). These claims would give the locators exclusive possessory rights to the federal mineral deposits subject to conditions under the 1872 Mining Law and other applicable statutes.

Under Alternative A no amendments would be made to Forest Plans.

#### Alternative A Scenarios

**Alternative A: No Mineral Withdrawal; Scenario A-1: NWM Agreement Not Implemented.** Under this scenario, (Map 2), all 22,000 acres of federal land in the study area remain available for mining, and up to 4,160 acres of private land are available for mineral development. The hypothetical mineral development forecast used to estimate the environmental effects that might occur under this scenario assumes up to three mines, 10 exploratory drilling operations, mine reclamation, a work camp for each mine, construction of a power line between Cody, WY and Cooke City, MT, and plowing Highway 212 east of Cooke City in the winter. The forecast assumes the New World Project likely would be developed; however, it assumes a lower probability of the two additional mines being developed.

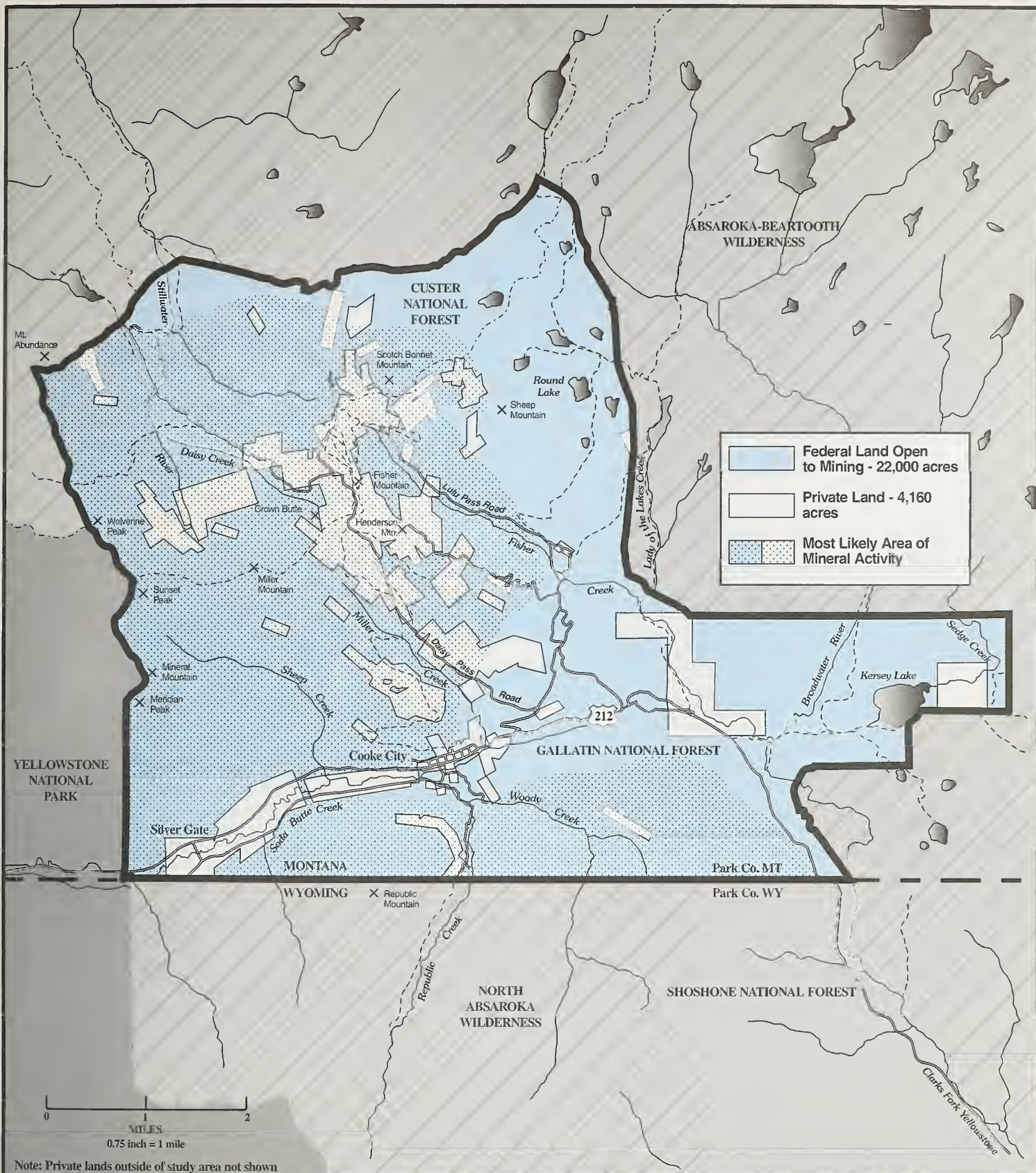
**Alternative A: No Mineral Withdrawal; Scenario A-2: NWM Agreement Implemented.** Under this scenario, (Map 3), 17,820 acres of federal land would be available for

TABLE 1. STATUS OF MINERAL ESTATE (ACRES)

LAND STATUS	ALTERNATIVE A: NO MINERAL WITHDRAWAL		ALTERNATIVE B: PROPOSED MINERAL WITHDRAWAL	
	Scenario A-1 NWM Agreement Not Implemented	Scenario A-2 NWM Agreement Implemented	Scenario B-1: NWM Agreement Not Implemented	Scenario B-2: NWM Agreement Implemented
Federal Lands Subject to the Proposed Mineral Withdrawal	0	0	22,000	22,000
<b>Federal Lands Available for Mining</b>				
Unclaimed	17,760	17,760	0	0
Existing Unpatented Mining Claims Subject to Valid Existing Rights	4,240	4,240	4,240	4,240
(Minus) Unpatented Mining Claims Subject to NWM Agreement	0	(4,180)	*0	(4,180)
Total Federal Lands Available for Mining	22,000	17,820	4,240	60
<b>Private Lands Available for Mining</b>				
Total Private Lands	4,160	4,160	4,160	4,160
(Minus) Private Lands Subject to NWM Agreement	0	(1,740)*	0	(1,740)
Remaining Private Lands Available for Mining	4,160	2,420	4,160	2,420
<b>Total Federal and Private Lands Available for Mining</b>	<b>26,160</b>	<b>20,240</b>	<b>8,400</b>	<b>2,480</b>

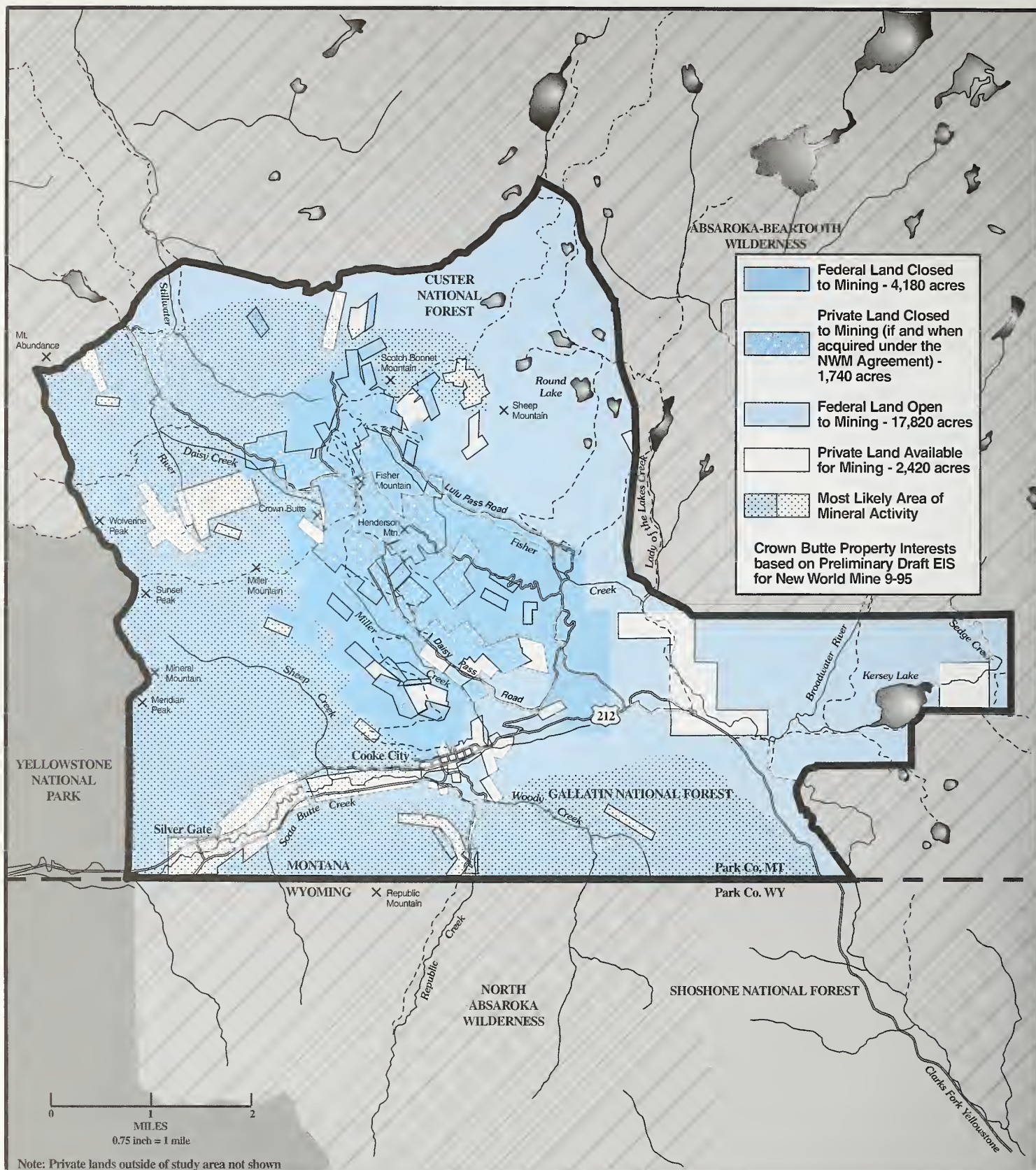
\* This figure is derived by assuming the mineral estate on these acres would be withdrawn by a separate withdrawal action.





		Yellowstone National Park		Study Area Boundary	<b>MAP 2</b> <b>ALTERNATIVE A:</b> <b>NO MINERAL WITHDRAWAL</b> <b>Scenario A-1: NWM Agreement</b> <b>Not Implemented</b>
		Wilderness		Streams	
		Private lands (not subject to withdrawal)		Trails	
		National Forest Land		Roads	
				National Forest Boundary	





### MAP 3

**ALTERNATIVE A:  
NO MINERAL WITHDRAWAL  
Scenario A-2: NWM Agreement  
Implemented**



mineral location and entry. The interests acquired by the United States under the NWM Agreement, including up to 1,740 acres of private mineral estate and 4,180 acres of unpatented mining claims, would not be available for mining.

Mineral development would be less likely in this scenario, given that most of the area of high mineral occurrence is not available for mineral entry. The hypothetical mineral forecast for this scenario assumes one mine, five exploratory drilling operations, mine reclamation, a work camp for the mine, construction of a power line between Cody, WY, and Cooke City, MT, and plowing Highway 212 east of Cooke City in the winter. The forecast assumes a low probability of a mine being developed.

## **Alternative B: Mineral Withdrawal Implemented**

Alternative B represents the proposed mineral withdrawal. The withdrawal would not allow individuals to locate new claims in the study area for federal hardrock minerals, including any minerals acquired by the federal government in the future. In addition, leasing of federal hardrock minerals would not be permitted. The mineral withdrawal would not apply to private lands.

In this alternative, federal minerals on up to 22,000 acres would be withdrawn from location and entry for a period of 20 years. Approximately 17,760 acres with no unpatented mining claims would be immediately subject to the withdrawal. If any private lands or minerals in the area are acquired by the federal government in the future, they would be subject to the withdrawal. The withdrawal would be subject to review at the end of 20 years according to federal regulations.

The Gallatin and Custer National Forest Land and Resource Plans (Forest Plans) would be amended to be consistent with the terms and conditions of a mineral withdrawal.

### **Alternative B Scenarios**

**Alternative B: Mineral Withdrawal Implemented; Scenario B-1: NWM Agreement Not Implemented.** Under this scenario, (Map 4), 17,760 acres of federal land would be withdrawn immediately from mineral location and entry. It is assumed that approximately 4,240 acres of existing unpatented mining claims on federal land and 4,160 acres of private land would remain available for mining activities.

The hypothetical mineral forecast used to estimate environmental effects for this scenario assumes up to three mines,

seven exploratory drilling operations, mine reclamation, a work camp for each mine, construction of a power line between Cody, WY and Cooke City, MT, and plowing Highway 212 east of Cooke City in the winter. The forecast assumes the New World mine likely would be developed; however, it assumes a lower probability for development of the two additional mines.

**Alternative B: Mineral Withdrawal Implemented; Scenario B-2: NWM Agreement Implemented.** Under this scenario (Map 5), 17,760 acres of unclaimed federal land are immediately subject to the mineral withdrawal. The interests acquired by the United States under the NWM Agreement, including up to 1,740 acres of private mineral estate and 4,180 acres of unpatented mining claims, would not be available for mining. Approximately 60 acres of unpatented mining claims on federal land and 2,420 acres of private land remain available for mineral development.

This scenario would have the least potential for mineral development of the four scenarios examined. The hypothetical mineral forecast includes no mines and only one exploratory drilling operation.

## **Management Common to All Alternatives**

All mining-related activities on federal lands are subject to surface management regulations and other state and federal laws. Unpatented claims require annual improvements or filing of holding fees. Surface activities are limited to uses reasonably incidental to mining operations. Bonding is required in accordance with Forest Service (FS) and State of Montana regulations. Any expected significant disturbance requires filing of a plan of operations with, and receiving approval from, the FS and the Montana Department of Environmental Quality before any surface disturbance can begin.

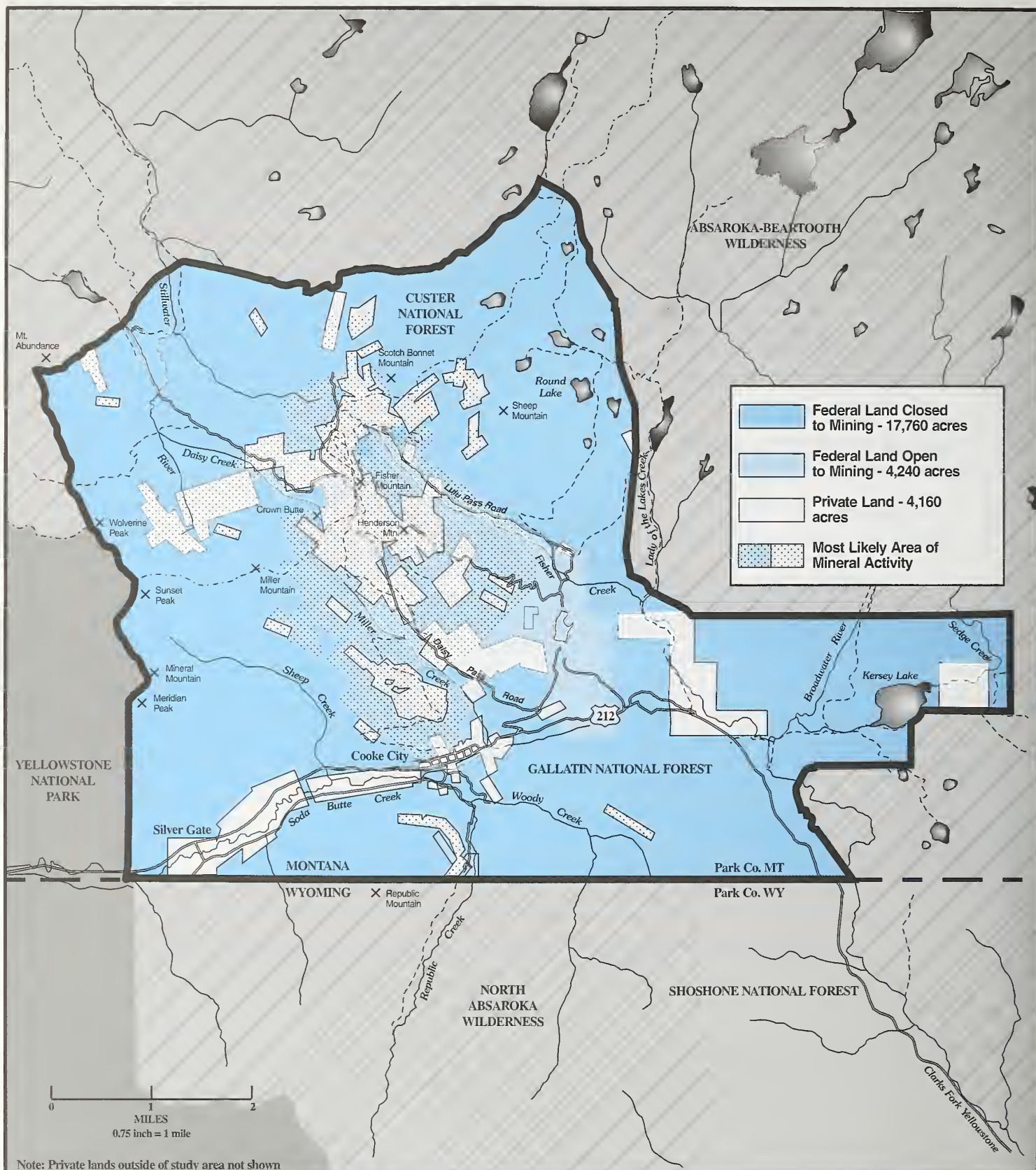
### **Preferred Alternative**

Alternative B: Proposed Mineral Withdrawal Implemented is the Preferred Alternative.

## **ALTERNATIVES ELIMINATED FROM DETAILED STUDY**

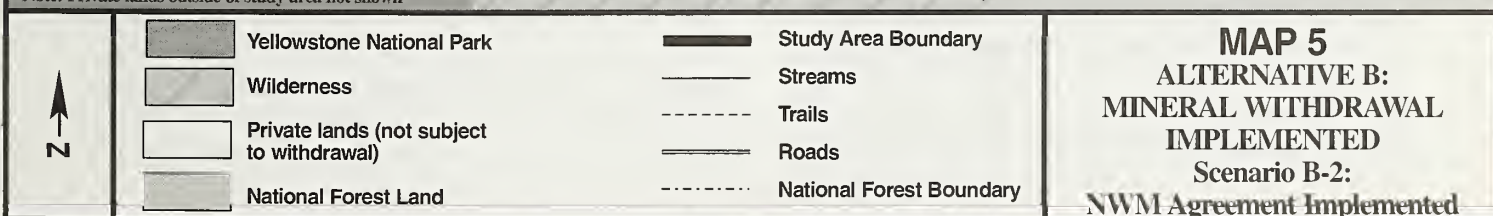
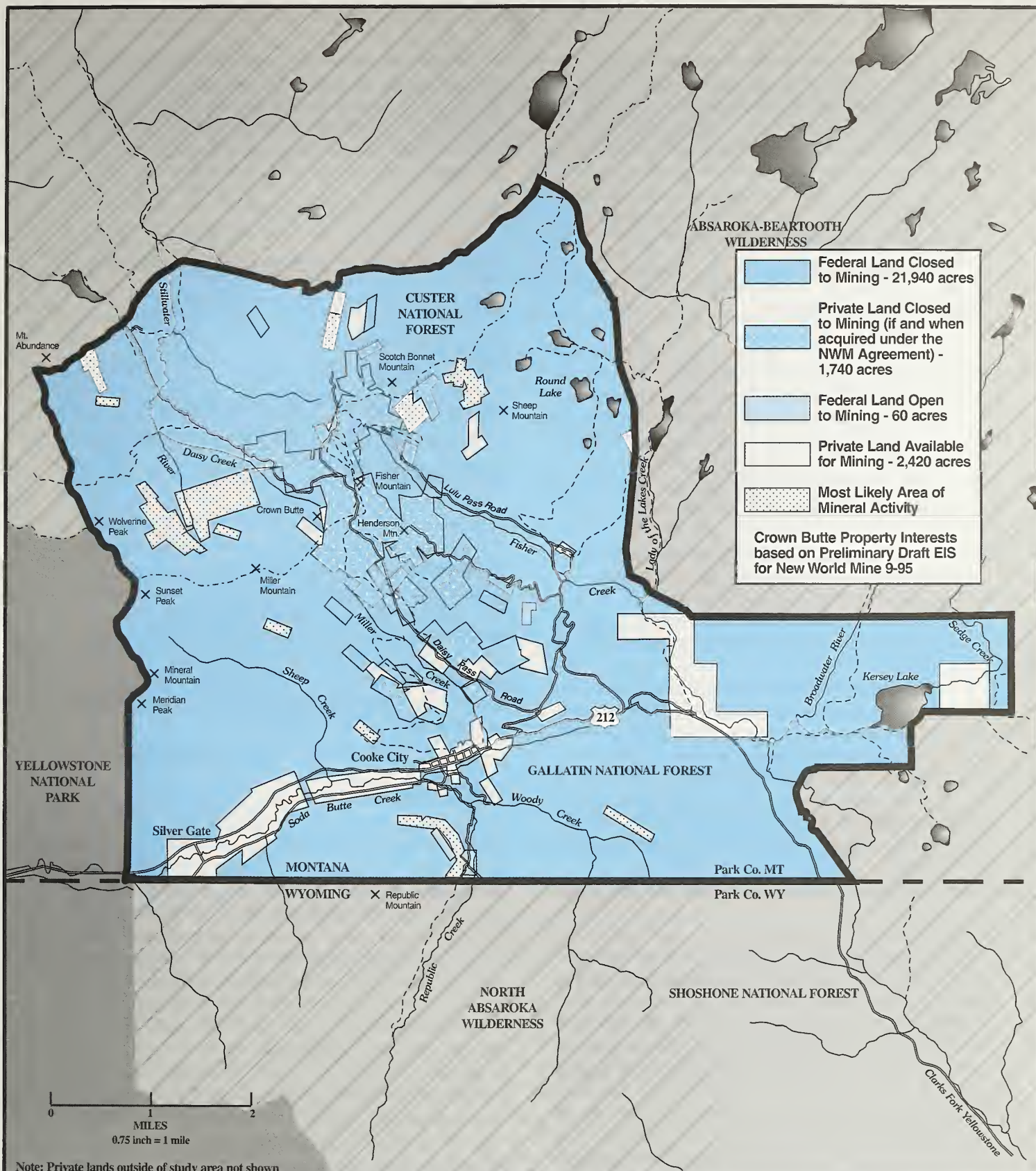
Some additional alternatives surfaced during the scoping process. The following alternatives were considered but not analyzed in detail:

- Reduce the size of the mineral withdrawal to a quarter mile buffer adjacent to Yellowstone National Park.



	Yellowstone National Park	Study Area Boundary	<b>MAP 4</b> <b>ALTERNATIVE B:</b> <b>MINERAL WITHDRAWAL</b> <b>IMPLEMENTED</b> <b>Scenario B-1: NWM Agreement</b> <b>Not Implemented</b>
	Wilderness	Streams	
	Private lands (not subject to withdrawal)	Trails	
	National Forest Land	Roads	
		National Forest Boundary	





- Expedite validity reviews of existing claims.
- Reduce the size of the mineral withdrawal to exclude the area with the highest mineral development potential.
- Extend the time period of the proposed withdrawal beyond 20 years.
- Expand the withdrawal area to include the corridor along the Clarks Fork of the Yellowstone River.
- Analyze the withdrawal of 19,100 acres.

These alternatives were not analyzed in detail for one or more of the following reasons:

- Anticipated effects would be the same as another alternative being analyzed in detail.
- The alternative does not better meet the purpose and need or result in different environmental effects.
- The alternative is inconsistent with laws and regulations.
- The alternative is beyond the scope of the proposed withdrawal decision.

Various other alternatives were also suggested during the comment period for the Draft EIS. These included:

- withdrawing areas along streams and drainages,
- establishing “custodians” of the proposed withdrawal area,
- establishing protective corridors along streams and forming a nonpartisan panel to achieve “environmental protection and resource production,”
- deferring the withdrawal until all uncertainties associated with the NWM Agreement are resolved,
- withdrawing only those areas which are in the area of highest mineral development potential but outside the areas that might be used for the New World Project,
- emphasizing reclamation of historic mining activities,
- withdrawing that area that drains into Yellowstone National Park,
- withdrawing watersheds and drainages capable of sustaining fisheries, and
- withdrawing watersheds and drainages capable of sustaining fisheries, and withdrawing a 250 foot protective corridor along other perennial drainages.

All of these alternatives were carefully considered. Many of these alternatives were mapped to determine what lands would be available for mining activities. After available areas were identified, a foreseeable mineral development scenario was predicted for each alternative. These new scenarios were compared to the scenarios that were analyzed in detail. If the land available for mining or the mineral development forecast was similar to one of the scenarios

that was already analyzed, the impact analysis would also be very similar. Therefore, the new alternative was not analyzed in further detail. Some alternatives were not analyzed in detail, because they did not provide a basis for analysis or the decision to be made was beyond the scope of this analysis.

## **AFFECTED ENVIRONMENT AND ENVIRONMENTAL EFFECTS**

### **SUBSTANTIVE CHANGES TO AFFECTED ENVIRONMENT AND ENVIRONMENTAL EFFECTS**

Additions and clarifications include the a summary of a “Failure Modes Effects Analysis” and further discussion on wetland effects and mitigation, mudslides, impacts of Cooke City/Silver Gate septic systems to water quality, recreation opportunity settings, travel management in the study area, scenic expectations of visitors, historical mining activity, effects to development of private lands and unpatented mining claims, and the economic and social effects of mining. The “Summary Comparison of Effects” table for each issue also has been updated.

## **INTRODUCTION**

This section describes the resources and values that could be affected by a decision to withdraw or not to withdraw federal lands within the study area from mineral location and entry. The resources and values discussed were raised as issues during scoping. Also described in this section are the environmental consequences that are anticipated to occur as a result of implementing each alternative.

### **Nature of Effects Analysis**

As previously discussed, the mineral withdrawal analysis focuses on a policy level decision concerning the appropriateness of future mining on federal lands in the area considering other resource values present. This broader look at the area differs from the project level analysis employed for a site-specific project, such as the New World Project. As illustrated in the Table 2, the project level analysis focuses on quantifying the effects of implementing site-specific alternatives designed to resolve resource issues and to



**TABLE 2. NATURE OF ANALYSIS**

<b>Mineral Withdrawal (Policy Level Decision)</b>	<b>New World Project (Site-Specific Project Decision)</b>
Effects largely based on assumptions about future mineral development	Effects based on site-specific plans
Effects are described on area or drainage level	Effects are site-specific based on location of facilities
Effects less easily quantified; described in terms of change, risk, trends	Effects can be more easily quantified or measured

mitigate effects of a specific project. The environmental effects of a mineral withdrawal are much less specific, and usually cannot be quantified as well as can those of a site-specific action.

The environmental effects on resources in and around the study area are based on the hypothetical mineral forecast for each Scenario, as described previously. Because the forecasts are speculative and general in nature, the environmental effects tend to be expressed in more general terms, focus more on changing trends, and are expressed more in terms of probable risk when compared to effects from a site-specific project.

## **Failure Modes Effects Analysis**

### **Mining-Related Risk to the Environment**

A number of commentors to the Draft EIS raised the issue of determining “risk” to area resources from potential mineral development. The concept of risk embodies two components: the likelihood of an event occurring, and the environmental consequences produced by the event should it occur. Expressed more simply:

$$\text{Risk} = (\text{likelihood}) \times (\text{consequences})$$

A recently completed “Failure Modes Effects Analysis Training Case Study Final Report” helps characterize mining-related risk for the Final EIS. The “Failure Modes Effects Analysis” (FMEA) is an engineering reliability technique used to systematically identify, characterize, and screen risks that derive from failure of an engineered system to operate or perform as intended.

The basic approach of FMEA is to divide a project facility into logical components, analyze each component, and ask questions: What could go wrong? What is the likelihood of it happening? What are the consequences if it does happen?

Key components identified in the Case Study include tailings dams, underground mine workings, and water management facilities. Each of the main components are further sub-divided into sub-components, and failure modes are identified for various aspects of each component. The failure modes also consider the development phases which include construction (2 years), operation (10 to 20 years), decommissioning (30 years) and post closure land use (1,000 years).

The likelihood of something going wrong with a component, as well as the probable consequences, are summarized. Consequences focus on potential effects to water quantity, water quality and aquatic life. Mitigation or compensation factors are identified for each failure mode. (Appendix H of the Final EIS describes the process in more detail.)

### **Use of FMEA in the CCAM Withdrawal EIS**

The FMEA discloses that the likelihood of failure varies by component and alternative, ranging from very low to high. The environmental consequences range from negligible to extreme depending on the component and alternative being considered.

The FMEA provides a characterization of risk associated with the mining of one known mineral deposit in the area. It does not necessarily characterize the full range of risk that might be associated with as yet undiscovered deposits and hypothetical mine proposals in the area. The FMEA does serve as an example of the types of failure modes, likelihood, and consequences that could be expected from mineral development in the area. References to FMEA are made in the following sections on Water Quality, Water Quantity, and Aquatic Resources.

### **Reasonably Foreseeable Activities Not Related to Mining**

There are activities, independent of mining, that are likely to occur in the area in the foreseeable future. These

activities are considered in the analysis as being “cumulative” to the effects of any potential mining and include highway reconstruction, mine reclamation, increasing recreation use, additional residential development and water rights limitations in Soda Butte Creek drainage.

## ISSUES, AFFECTED ENVIRONMENT, AND ENVIRONMENTAL CONSEQUENCES

The following discussion focuses on the issues raised in scoping and used as a basis for the effects analysis. For each issue, there is a description of the affected environment and a summary comparison of the potential environmental effects of implementing each of the four Scenarios.

### Water Quantity and Quality, Wetlands, and Floodplains

**Affected Environment.** The study area is relatively moist with an annual average precipitation of 35-60 inches, high drainage density of perennial streams, and an extensive wetland resource. Parts of the headwaters of three systems originate in the study area - Stillwater, Clarks Fork, and Lamar Rivers (via Soda Butte Creek).

The study area includes the headwaters of Outstanding Natural Resource Waters, including streams which flow through Yellowstone NP and wilderness areas. Portions of the Clarks Fork and Stillwater Rivers and Soda Butte Creek are either designated or eligible Wild and Scenic Rivers. Degradation of water quality of streams that originate in the study area and flow into adjacent wilderness or Yellowstone NP is not permitted.

Streams in the valley bottoms are connected to, and recharged by, ground water. Ground water supports many wetlands in seeps, springs, and shallow water tables.

Steep terrain, heavy snowpack, and occasional localized intensive rainstorms result in frequent debris-flow mudslides in the study area. Highway 212 culverts and ditches are frequently impacted with mudslides. Snowmelt runoff in 1996 resulted in severe mudslides and flooded sections of Highway 212 for several days.

Historical watershed disturbances including roads, the 1988 fires, and historical mining activities have reduced water quality in several study area streams. Fisher Creek, the Upper Clarks Fork River, Daisy Creek, the Upper Stillwater River, and upper Soda Butte Creek have been most heavily impacted. Past mining activities have altered ground-water



*Acid rock drainage from Glengarry Adit, upper Fisher Creek.*

levels in the vicinity of some adits, particularly Glengarry and Gold Dust adits.

Certain mining-related activities pose risks to these watersheds. These risks include the potential for increased acid-rock drainage, the potential for ground-water contamination from underground mines, the potential for failure of tailings impoundments and the uncertainty of mitigating effects to wetlands. (Mining-related risks for the NWP are summarized in Appendix H of the Final EIS.)

**Environmental Consequences.** A water quality regulatory framework is in place to deal with potential adverse effects. Development of mines in the study area (underground or surface) would require careful mine facility design, ground-water mitigation techniques, and capture and treatment of contaminated ground water as it emerges. Intensive ground-water mitigation could reduce, but not eliminate, the potential for ground-water contamination. Ground-water change could be managed with underground mitigation, but surface water treatment may be needed to meet standards. Treatment of water would continue for as long as necessary



to meet water quality standards. Indirect effects may occur to wetlands due to stream flow reductions and degraded ground water quality. Wetland impact analysis requires mapping of all wetland areas, determination of associated wetland functions, and wetland mitigation. Wetland mitigation sites outside the study area might be necessary. Some wetland losses, such as fens, cannot be recreated.

If completely and successfully implemented, regulations and mitigation would protect water resources to regulatory standards; however, risks and uncertainties are inherent in any mine. Although mine operations have made concerted efforts in recent years to comply with environmental standards, departures from standards have occurred. There remains a potential for failure of designed mitigation or facilities such as tailings impoundments. Water quality may improve with reclamation required on Crown-Butte controlled lands.

Table 3 presents a comparison of the environmental effects that may occur with implementation of each scenario.

## Aquatic Resources

**Affected Environment.** The physical and chemical attributes of a stream provide the habitat framework for the development of the biological community. Physical attributes such as stream gradient and stream channel dimensions, and chemical attributes, such as water quality, are basically products of the climate, geology and soils, topography, hydrology and land use in the watershed. Changes in one or more characteristics due to future mining could potentially result in changes in the physical and chemical attributes of a stream, and lead to changes in the quality of habitat for aquatic life.

Physical habitat conditions for fish (e.g., availability of high quality pools and instream cover, and the amount and quality of spawning habitat) in Fisher Creek are rated as poor. Adult and juvenile (fish) habitat throughout the upper reaches is lacking and would limit the number of fish it could support if water quality improved. Habitat is more abundant for all life stages throughout the lower reach (above the Clarks Fork); however, the quality of habitat throughout this more sensitive reach has been degraded due to excessive fine sediment deposition from historical watershed disturbances. The existing water quality, particularly in the upper reaches of the stream, is also poor, due to a low pH and the presence of heavy metals, resulting from historical mine drainage and naturally occurring exposed mineralized areas that generate acid. These conditions preclude fish from inhabiting Fisher Creek and limits other forms of aquatic life in that stream.

Aquatic habitat in the upper reaches of the Clarks Fork River in the study area is "fair" condition. Water quality appears better than in Fisher Creek, primarily due to dilution by Lady of the Lake Creek; however, water quality is still affected by historical mine drainage. Except for the 1988 fires, there has been little watershed disturbance in the Broadwater River, and habitat quality for all life stages of fish and water quality is rated good to excellent.

The Miller Creek drainage is naturally void of fish because of barriers; however the existing invertebrate community indicates a relatively healthy stream. For Soda Butte Creek, conditions for fish and aquatic life are fair upstream of the McLaren tailings and downstream from Woody Creek. Aquatic health in Soda Butte Creek above McLaren tailings is good, but below the tailings to the Woody Creek confluence poor water quality limits aquatic life. Natural erosion in the Woody Creek drainage contributes extremely high levels of sediment to Soda Butte Creek. Soda Butte Creek below the Woody Creek confluence to Ice Box Canyon supports a genetically pure, isolated population of Yellowstone Cutthroat trout which is considered a sensitive fish species by the Forest Service. Because the population is isolated, it has a low resiliency to catastrophic disturbance.

Poor conditions are present in Woody and Republic Creeks primarily due to extremely high sediment loads and unstable habitat conditions. Historical mining may be influencing water quality in those streams. The overall aquatic health in Sheep Creek is good.

Daisy Creek and the Stillwater River below the Daisy Creek confluence to Goose Creek are in poor health due to poor water quality and high sediment levels. Upstream of Daisy Creek and below Goose Creek, the stream is in fair condition. The Stillwater drainage above the wilderness boundary is naturally void of fish.

Recent reclamation efforts, including recontouring and revegetating roads and open pit mines, and rerouting water from the Glengarry adit have improved aquatic health by reducing sediment and metal loads, but to an unknown degree. Future reclamation plans commensurate with the NWM Agreement (i.e., reclamation of the McLaren and Como pits, closure of the Glengarry Adit), or other remediation of historical mining disturbances via enforcement of the Clean Water Act, would further reduce sediment yield and improve water quality. Water quality improvements would subsequently improve the biological health of area streams to the extent reclamation efforts were successful. These improvements would result in net cumulative benefits to stream ecosystem health.

**Environmental Consequences.** Table 4 presents a comparison of the environmental effects that may occur with implementation of each Scenario.

**Table 3. SUMMARY COMPARISON OF EFFECTS TO WATER QUANTITY AND QUALITY, WETLANDS AND FLOODPLAINS BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST**

Alternative A, No Mineral Withdrawal Scenario A-1: NWM Agreement Not Implemented	Alternative A, No Mineral Withdrawal Scenario A-2: NWM Agreement Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-1: NWM Agreement Not Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-2: NWM Agreement Implemented
<p align="center"><b>Surface and Ground Water, Wetlands, and Floodplains</b></p>			
<p>Mining-related effects would vary by Scenario, based on probability of mineral development. General effects of mining could result in stream flow reduction and degraded ground-water quality. Changes in ground water would also affect surface water quality where water emerges in streams, springs, or seeps. Mining-related risks to water resources in this area include the potential for increased acid-rock drainage, the potential for ground-water contamination from underground mines, potential for failure of tailings impoundments, and uncertainty of mitigating effects to wetlands (Appendix H, Failure Modes Effects Analysis). Surface water quality would be closely regulated with MPDES permits for point discharges and storm water permits for non-point discharges in order to meet water quality standards and non-degradation requirements. Mining could also result in the filling of wetlands and floodplains within the study area which has very limited availability of wetland mitigation sites. Impacts to wetlands caused by streamflow reductions and degraded ground-water quality may occur. Wetland impact analysis requires the delineation and mapping of all potentially affected wetlands and non-wetland waters of the US, a determination of their functions, a rigorous exploration of alternatives that avoid and minimize impacts, and an investigation of ways to mitigate unavoidable impacts. Some wetland losses, such as fens, cannot be recreated.</p>	<p>Potential for impacts on surface and ground-water quality, wetlands, and floodplains from mining would be much less than with Scenario A-1. Impacts may occur in either Stillwater or Soda Butte Creek drainage if a mine is developed.</p>	<p>Potential for impacts on surface and ground-water quality, wetlands, and floodplains from mining would be similar to Scenario A-1. Mining would not occur on streams, wetlands, and floodplains on 17,760 acres withdrawn; however, mining of adjacent areas could affect the streams, wetlands and floodplains withdrawn from mineral entry. Some NWM facility sites would be withdrawn; remaining available locations may increase the risk to water quality and wetlands compared to Scenario A-1.</p>	<p>Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. Potential impacts on surface and ground-water quality, wetlands, and floodplains would not be anticipated from mining.</p>
<p>Potential for impacts on surface and ground-water quality, wetlands, and floodplains would be greatest with the mining activities forecast in this Scenario. Impacts could occur on all three major drainages.</p>	<p>Potential for impacts on surface and ground-water quality, wetlands, and floodplains from mining activities would be much less than with Scenario A-1. Impacts may occur in either Stillwater or Soda Butte Creek drainage if a mine is developed.</p>	<p>Potential for impacts on surface and ground-water quality, wetlands, and floodplains from mining would be similar to Scenario A-1. Mining would not occur on streams, wetlands, and floodplains on 17,760 acres withdrawn; however, mining of adjacent areas could affect the streams, wetlands and floodplains withdrawn from mineral entry. Some NWM facility sites would be withdrawn; remaining available locations may increase the risk to water quality and wetlands compared to Scenario A-1.</p>	<p>Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. Potential impacts on surface and ground-water quality, wetlands, and floodplains would not be anticipated from mining.</p>



**Table 4. SUMMARY COMPARISON OF EFFECTS TO AQUATIC RESOURCES BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST**

Alternative A, No Mineral Withdrawal Scenario A-1: NWM Agreement Not Implemented	Alternative A, No Mineral Withdrawal Scenario A-2: NWM Agreement Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-1: NWM Agreement Not Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-2: NWM Agreement Implemented
Aquatic Resources			
Mining-related effects would vary by Scenario, based on probability of mineral development. General effects of mining could affect fish and other aquatic life by reducing streamflow, increasing sedimentation, and changing water quality. These changes in some streams, e.g. Upper Fisher Creek and Daisy Creek, would have minimal effect on aquatic habitat and biota because they are already severely impaired from historic mining. Degradation of comparatively healthy streams, e.g. Miller Creek, the Broadwater and Clarks Fork Rivers, and Soda Butte Creek, would be more significant.			
Potential for impacts on fish and aquatic life from mining would be greatest with this Scenario. Impacts could occur on all three major drainages.	Potential for impacts on fish and aquatic life from mining would be much less than with Scenario A-1. Impacts may occur in streams in either Stillwater or Soda Butte Creek drainage if a mine is developed.	Potential for impacts on fish and aquatic life from mining would be similar to Scenario A-1. Impacts could originate on private land or federal land with valid claims on any of the three major drainages. Some NWM facility sites would be withdrawn; remaining available locations may increase the risk to aquatics compared to Scenario A-1.	Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. Potential impacts on fish and other aquatic life would not be anticipated from mining.

## Recreation, Scenic Integrity, Yellowstone National Park, Special Areas, Air Quality

### Recreation and Scenic Integrity

**Affected Environment.** The study area is part of the Greater Yellowstone area and offers spectacular scenery, abundant wildlife and unique geologic features all within a vast, relatively undisturbed area. Consequently, the quality of outdoor recreation is extremely high. The study area is popular as a recreation area and as an origination point for trips into the surrounding wilderness. Popular activities include backpacking and back-country use, driving for pleasure, fishing, mountain biking, hunting, snowmobiling, hiking, horseback riding, camping, and cross country skiing. Maintenance of recreational resources in the study area is important for both economic and quality of life reasons. Recreation opportunity settings that support the popular activities include "rural class," "roaded naturally-appearing wildland," "semi-primitive wildland," and "designated Wilderness."

Motorized vehicle access in and around the study area is managed by the Gallatin National Forest. Restrictions on motorized use are displayed on the 1996 Gallatin National Forest Visitors' Map.

Scenic integrity of the study area remains high with man-made alterations limited to the highway corridor and the central portion of the study area (Lulu Pass/Daisy Pass loop road). Scenic expectations of visitors are high, due to the proximity of Yellowstone National Park, the Beartooth Plateau, the Beartooth and Chief Joseph Scenic Byways, and surrounding Wilderness areas. Key observation points include the surrounding wilderness, Yellowstone NP, study area access roads, and highway viewpoints. Cultural features in the study area contribute to scenic integrity.

**Environmental Consequences.** Table 5 presents a comparison of the environmental effects that may occur with implementation of each Scenario.

### Yellowstone National Park

**Affected Environment.** Yellowstone National Park (NP) is nationally and internationally renowned for its geothermal features, scenery and wildlife. Yellowstone NP borders approximately three miles of the proposed mineral withdrawal area, and 38 percent of the study area drains into the Park via the Soda Butte Creek drainage. Concerns expressed by the National Park Service (NPS) relate to the potential effects of mining on the following issues:

**Water quality and quantity in Soda Butte Creek** - Soda Butte Creek in Yellowstone NP is considered an Outstand-

ing Natural Resource Water; consequently, water quality degradation is not permitted. The State of Montana has completed a water rights compact with the United States for Soda Butte Creek. The NPS has instream flow rights for the entire flow of Soda Butte Creek subject to certain existing and future surface and ground water rights. Water quality in Soda Butte Creek is impaired from past mining (McLaren tailings) and high levels of natural sediment from Woody and Republic Creek.

**Traffic, Park Highways, and Park Operations** - US Highway 212, the Beartooth Scenic Byway, through Cooke City/Silver Gate is one of five main entrances to Yellowstone NP. US 212 east of Cooke City is closed during the winter. Winter travel from the study area to Yellowstone NP is limited to US 212 west through the Park and then north to Gardiner. The NPS provides many important services to the Cooke City/Silver Gate area, including road maintenance and snow plowing, emergency medical services, first response and back-up law enforcement, and solid waste collection.

**Recreation/Tourism** - Yellowstone NP receives over three million visitors per year; about 7 percent of the visitors enter via the Northeast entrance near Cooke City. The northeast entrance has had the greatest percentage increase in visitors of the five Park entrances. This could partially be due to rerouting of visitors from the Park's east entrance because of reconstruction and associated traffic delays and temporary closure of the east entrance road in the Park, and to the reintroduction of the gray wolf into the Lamar Valley.



*Soda Butte Creek, Yellowstone National Park, downstream from study area.*

**Noise** - In the northeast corner of Yellowstone NP, primary sources of noise include vehicle traffic on the Tower Junction/northeast entrance highway and US 212; chainsaw sounds from occasional firewood cutting on private and federal lands near the Park's northeast entrance, and snowmobiles on private and National Forest administered land adjacent to the Park. The Daisy Pass and Lulu Pass areas in the study area are very popular snowmobile areas.



**Table 5. SUMMARY COMPARISON OF EFFECTS TO RECREATION AND SCENIC INTEGRITY BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST**

Alternative A, No Mineral Withdrawal Scenario A-1: NWM Agreement Not Implemented	Alternative A, No Mineral Withdrawal Scenario A-2: NWM Agreement Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-1: NWM Agreement Not Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-2: NWM Agreement Implemented
Recreation and Scenic Integrity			
<p>Mining-related effects would vary by Scenario, based on probability of mineral development. General effects of mining activities would change the recreation setting, recreation experiences, level of recreation use, and scenic integrity of the area. Mining would likely change recreation settings in semi-primitive areas to a roaded natural setting. Changes in noise, lighting, traffic, and local population caused by mining are also likely to change the recreation experiences. Overall recreation use would not be expected to change even though users seeking solitude and natural environments may be displaced. Improved local access roads, winter access, and increases in local population would increase use. Mining would likely change scenic integrity levels in areas of very high, high or moderate scenic integrity to lower levels. Depending on the location, mining related activities could be visible from wilderness areas or Yellowstone NP.</p>			
<p>Potential for impacts on recreation setting, recreation experiences, recreation use and scenic integrity from mining related activities forecast under this Scenario would be more likely than with the other Scenarios. Impacts would be most likely in the Lulu/Daisy Pass, 212 Corridor, Sheep Creek, Upper Stillwater, and Woody Creek recreation settings. Near mine locations, scenic integrity would change from moderate to low or very low levels.</p>	<p>Potential for impacts on recreation setting, recreation experiences, recreation use and scenic integrity from mining forecast under this Scenario would be much less than under Scenario A-1. Impacts would be most likely outside the Lulu/Daisy Pass recreation settings. The remaining federal lands open to mineral entry have high to very high scenic integrity levels. If mining occurs, scenic integrity levels would likely drop depending upon size and location of mineral activity.</p>	<p>Potential for impacts on recreation setting, recreation experiences, recreation use and scenic integrity from mining activities would be similar to Scenario A-1, but these impacts would most likely occur in the Lulu/Daisy Pass recreation settings. Semi-primitive recreation setting and opportunities on 17,760 acres would be maintained. Scenic integrity would not be affected by mining on 17,760 acres withdrawn.</p>	<p>Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. Potential mining-related impacts on recreation setting, recreation experiences, level of recreation use, and scenic integrity of the area would not be anticipated.</p>

**Scenic Integrity** - The study area, or portions thereof, is visible from some higher elevation locations, such as Wolverine Peak, along the northeast boundary of the Park. Some historical mine disturbances, such as the McLaren Pit, are visible from Wolverine Peak. These disturbances, which are in the process of being recontoured and revegetated with native plants, will eventually blend with the surrounding landscape. The only hiking trail offering a view of the study area crosses Republic Pass about six miles south of the area. The number of backcountry users of Republic Pass and Wolverine Peak is low. The study area is also briefly visible from US 212 near the northeast entrance to the Park.

**Air quality and visibility** - Yellowstone NP is designated as a Class 1 airshed under the Prevention of Significant Deterioration (PSD) program of the Clean Air Act. Prevailing wind direction in the Park is from the southwest; although, storm fronts can have northerly or southerly wind directions. Airflow into Yellowstone NP from the study area occurs from summertime down-valley breezes associated with nighttime cold air drainage.

**World Heritage Site and Biosphere Reserve** - Yellowstone NP has been designated as both a World Heritage Site (cultural and natural property), and a Biosphere Reserve (unaltered natural integrity and ecological integrity of area). In 1995, the World Heritage Committee placed Yellowstone NP on the list of World Heritage in danger because of ascertained and potential dangers. The Committee noted that potential threats to the Park from proposed mining-related activities include the effects on quantity and quality of ground and surface water.

**Environmental Consequences.** Table 6 presents a comparison of the environmental effects that may occur with implementation of each Scenario.

## Wilderness

**Affected Environment.** With exception of the Highway 212 corridor into Wyoming, the study area is virtually surrounded by the Absaroka-Beartooth (A-B) Wilderness, the North Absaroka Wilderness in Wyoming, and Yellowstone NP. The Wilderness Act directs land managing agencies to protect the natural character of the wilderness and to provide for recreational, scenic, scientific, educational, cultural, and historical uses of wilderness. The Wilderness Act defines four requisite attributes of wilderness: natural integrity, apparent naturalness, outstanding opportunities for solitude, and opportunities for primitive recreation. These attributes are applied to the conditions inside the boundaries of the wilderness. Although the experience of wilderness visitors might be affected by

activities outside the Wilderness boundary, the Wilderness Act does not require that adverse effects associated with those activities be mitigated.

The final boundaries of the A-B and the North Absaroka Wilderness were established for many reasons. The most obvious were to include those areas with the most outstanding wilderness qualities. The boundaries were adjusted to fit the terrain and to facilitate management of the Wilderness area. The proposed mineral withdrawal study area was excluded from Wilderness designation due to the presence of private land, access roads, and mineral potential. Areas were also excluded to provide for nonwilderness values such as motorized recreation and to allow for wildlife habitat improvement projects.

The A-B is the most heavily visited wilderness in the Forest Service Northern Region. Within the study area, 11 trails access the A-B Wilderness while one trail accesses the North Absaroka Wilderness. Water quality degradation is not permitted for waters entering wilderness.

**Environmental Consequences.** Table 7 presents a comparison of the environmental effects that may occur with implementation of each Scenario.

## Roadless Areas

**Affected Environment.** Inventoried roadless areas refer to areas of National Forest System lands larger than 5,000 contiguous acres (unless adjacent to an existing wilderness area) with no developed roads that have been inventoried for possible inclusion into the Wilderness Preservation System. Nearly 13,000 acres, or 60 percent of the study area is inventoried "roadless". The roadless areas are adjacent to the A-B and North Absaroka Wildernesses. The four inventoried roadless areas are Republic Mountain, Reef, North Absaroka, and Beartooth. The Republic Mountain area was recommended for wilderness in the Gallatin NF plan. The other three areas were not recommended for wilderness designation by the Forest Service, nor were they included in any recent Montana wilderness bills.

Six criteria are used in evaluating effects on roadless areas: natural integrity, apparent naturalness, remoteness, solitude, special features, and manageability and boundaries. These criteria serve as the basis for evaluating effects to roadless area that may occur from future mining.

The Beartooth Roadless Area is currently affected in several ways by man-made features. The Goose Lake road which bisects the roadless area, provides motorized access for four-wheel drive and off-highway (4X4/OHV) vehicles to area lakes. Development around Kersey Lake also affects the natural integrity of the roadless area. Motorized



**Table 6. SUMMARY COMPARISON OF EFFECTS TO YELLOWSTONE PARK BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST**

Alternative A, No Mineral Withdrawal Scenario A-1: NWM Agreement Not Implemented	Alternative A, No Mineral Withdrawal Scenario A-2: NWM Agreement Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-1: NWM Agreement Not Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-2: NWM Agreement Implemented
<b>Yellowstone National Park</b>			
<p>Mining-related effects would vary by Scenario, based on probability of mineral development. General effects of mining in the study area could increase the need for staff, housing, road maintenance, and other services within the Park due to additional winter access and increased local population in the Cooke City/Silver Gate area. Park visitation would also increase at the NE entrance of Yellowstone NP if the highway between Cooke City, MT and Cody, WY is open all winter. Backcountry visitor experiences in the NE portion of the Park near the Park boundary could be affected by noise, night lighting, and other visual impacts. Mining could degrade water quality and reduce quantity in Soda Butte Creek which flows into the Park. Mining could continue as one of the identified threats that caused the World Heritage Committee to include Yellowstone NP on a list of World Heritage Sites in Danger. Mining would not affect the Park's Biosphere Reserve designation. Backcountry visitors near the study area could experience high noise levels, more night lighting, and altered landscapes.</p>			
Potential for impacts on Park operations, Park visitation, visitor experiences, and World Heritage Site designation from mining related activities forecast under this Scenario would be more likely than with the other Scenarios. Lands adjacent to Yellowstone NP would remain available for mineral entry.	Potential for impacts on Park operations, Park visitation, visitor experiences, and World Heritage Site designation from mining forecast under this Scenario would be much less than under Scenario A-1. Lands adjacent to Yellowstone NP would remain available for mineral entry.	Potential for impacts on Park operations, Park visitation, visitor experiences, and World Heritage Site designation from mining activities would be similar to Scenario A-1. Lands adjacent to Yellowstone NP would be withdrawn from mineral entry.	Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. Potential for impacts on Park operations, Park visitation, visitor experiences, and World Heritage Site designation from mining related activities would not be anticipated.

**Table 7. SUMMARY COMPARISON OF EFFECTS TO WILDERNESS BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST**

Alternative A, No Mineral Withdrawal Scenario A-1: NWM Agreement Not Implemented	Alternative A, No Mineral Withdrawal Scenario A-2: NWM Agreement Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-1: NWM Agreement Not Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-2: NWM Agreement Implemented
Wilderness			
Mining-related effects would vary by Scenario, based on probability of mineral development. Noise, night lighting, and increased population associated with mining development could change the solitude, natural integrity, and primitive recreation experience available in wilderness areas surrounding the study area. Changes in nearby human activity, noise, dust, wilderness water quality, and night lighting caused by mining would also likely change the primitive recreation experience. Users seeking solitude and natural environments may be displaced. Effects would depend upon the location and size of future mines. Generally, effects diminish as you move deeper into the wilderness. Natural integrity could be influenced if wilderness water quality is degraded. The risks of mining-related water quality degradation are summarized in Appendix H, Failure Modes Effects Analysis.	Potential for impacts on solitude, natural integrity, and primitive recreation from mining forecast under this Scenario would be much less than under Scenario A-1. Impacts would also be less likely in the Clarks Fork watershed due to the NWM Agreement. Lands next to wilderness would remain available for mineral entry.	Potential for impacts on solitude, natural integrity, and primitive recreation from mining activities would be less than with Scenario A-1 because mining would be concentrated in the center of the study area. Although 17,760 acres of federal land adjacent to wilderness would be unavailable for mining related activities, mining could affect water quality in the Clarks Fork and Stillwater Rivers which flow into the A-B Wilderness.	Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. The withdrawal would not alter the solitude, natural integrity, and primitive recreation opportunities.
Potential for impacts on solitude, natural integrity, and primitive recreation from mining related activities forecast under this Scenario would be more likely than with the other Scenarios. Impacts would be most likely in Absaroka-Beartooth Wilderness west and north of the study area. Lands adjacent to wilderness would remain available for mineral entry. Mining could affect water quality of the Clarks Fork and Stillwater rivers; both rivers flow into the Absaroka-Beartooth Wilderness.	Potential for impacts on solitude, natural integrity, and primitive recreation from mining forecast under this Scenario would be much less than under Scenario A-1. Impacts would also be less likely in the Clarks Fork watershed due to the NWM Agreement. Lands next to wilderness would remain available for mineral entry.	Potential for impacts on solitude, natural integrity, and primitive recreation from mining activities would be less than with Scenario A-1 because mining would be concentrated in the center of the study area. Although 17,760 acres of federal land adjacent to wilderness would be unavailable for mining related activities, mining could affect water quality in the Clarks Fork and Stillwater Rivers which flow into the A-B Wilderness.	Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. The withdrawal would not alter the solitude, natural integrity, and primitive recreation opportunities.





*Round Lake, Beartooth Roadless Area, northeast portion of study area.*

4X4/OHV use on roads in the summer and snowmobiling in the winter reduce the apparent naturalness and remoteness of the roadless area. Noise from US 212 is audible within the portion of the area near the highway.

The North Absaroka Roadless Area is composed of 12 separate units, of which two units, Mineral Mountain on the Gallatin NF and Mount Abundance on the Custer NF, are within the study area. These units show evidence of past mining activity in places; otherwise, the natural integrity of the units is unimpaired. Opportunities for solitude are fair because of the proximity to Cooke City and Silver Gate, adjacent resource activity, and limited size. The area has more motorized (primarily snowmobiling) than nonmotorized use.

The Reef Roadless Area is surrounded by US 212 on the north, and natural, undisturbed land in the southern part of the area. The natural integrity, remoteness, and opportunities for solitude are limited in the northern part of the Roadless Area because of impacts from traffic on US 212.

Away from the highway, the roadless area has a high degree of natural integrity.

The Republic Mountain Roadless Area is just southwest of Cooke City and is well accessed by US 212 on the north and by the Irma Mine 4x4 trail on the east. The natural integrity of the roadless area is affected by old mine workings in a few places; however, the impacts from previous mining are confined to the flatter areas along the north and east boundaries and do not extend to the steeper slopes.

***Environmental Consequences.*** Table 8 presents a comparison of the environmental effects that may occur with implementation of each scenario.

### **Wild and Scenic Rivers**

***Affected Environment.*** All drainages in the study area are tributaries to a designated or eligible Wild and Scenic River segment. The Clarks Fork is a designated "Wild" river 20 miles downstream from the study area. Outstandingly remarkable values include scenery, recreation and history. Within the study area, a 1.8 mile segment of the Clarks Fork River is eligible for designation based on outstanding scenery. Soda Butte Creek within Yellowstone National Park is an eligible river with outstandingly remarkable values of scenery, wildlife, history and geology. A 20-mile segment of the Stillwater River within the A-B Wilderness immediately downstream from the study area is eligible as a "Wild" river, based on recreation and scenic values. A two-mile segment of the Upper Stillwater River within the study area is eligible as a recreation river due to recreation and scenic values. The water quality of the Upper Clarks Fork, Soda Butte Creek, and the Stillwater River has been degraded from historical mining activities. On-going mine reclamation activities in the area may improve water quality.

***Environmental Consequences.*** Table 9 presents a comparison of the environmental effects that may occur with implementation of each Scenario.

### **Air Quality**

***Affected Environment.*** Air quality in the study area is excellent. Yellowstone NP and the North Absaroka Wilderness area to the south were designated as Class I PSD areas under the Prevention of Significant Deterioration (PSD) program when the Clear Air Act was amended in August 1977. The A-B Wilderness, which was established in March 1978, is a Class II area.

Prevailing wind direction is from the southwest, although individual storm fronts can have prevailing north or south

**Table 8. SUMMARY COMPARISON OF EFFECTS TO ROADLESS AREAS BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST**

Alternative A, No Mineral Withdrawal Scenario A-1: NWM Agreement Not Implemented	Alternative A, No Mineral Withdrawal Scenario A-2: NWM Agreement Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-1: NWM Agreement Not Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-2: NWM Agreement Implemented
<b>Roadless Areas</b>			
Mining-related effects would vary by Scenario, based on probability of mineral development. General effects of mining related activities could change the natural integrity and apparent naturalness, the remoteness and solitude, and the manageability and boundaries of roadless areas. The actual effects would depend upon the size and location of future mining activity.			
Potential for impacts on natural integrity and apparent naturalness, remoteness and solitude, and the manageability and boundaries of four roadless areas from mining related activities forecast under this Scenario would be more likely than with the other Scenarios. NWP may reduce the size of the Beartooth Roadless Area (RA). All roadless areas remain available for mineral entry.	Potential for impacts on natural integrity and apparent naturalness, remoteness and solitude, and the manageability and boundaries of three roadless areas from mining forecast under this Scenario would be much less than under Scenario A-1. The Beartooth RA probably would not be affected. Roadless areas would remain available for mineral entry.	Reef, Republic Mountain, and most of N. Absaroka and Beartooth RAs would be withdrawn from mineral entry. Effects from mining in the central portion of the study area could affect the feelings of remoteness and solitude of these areas. The NWP may reduce the size of the Beartooth RA.	Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. Potential impacts on natural integrity, apparent naturalness, remoteness, solitude, manageability, and boundaries of roadless areas withdrawn from mineral entry would not be anticipated from mining. Roadless areas are not available for mineral entry.



**Table 9. SUMMARY COMPARISON OF EFFECTS TO WILD AND SCENIC RIVERS BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST**

Alternative A, No Mineral Withdrawal Scenario A-1: NWM Agreement Not Implemented	Alternative A, No Mineral Withdrawal Scenario A-2: NWM Agreement Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-1: NWM Agreement Not Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-2: NWM Agreement Implemented
<b>Wild &amp; Scenic Rivers</b>			
<p>Mining-related effects would vary by Scenario, based on probability of mineral development. General effects of mining related activities could change water quality, and outstandingly remarkable values of certain Wild and Scenic river segments. Most eligible or designated Wild and Scenic river segments are outside the study area. Mining upstream could degrade water quality if there are mine facility failures or ground-water contamination. The potential effects of future mining on designated and eligible Wild and Scenic River segments depends upon the location, size and operational success of future mines. If future mines affect the outstandingly remarkable values, (scenic, recreational, geologic, fish and wildlife, historical, and cultural) or the characteristics (free of impoundments, inaccessible except by trail, essentially primitive shorelines, unpolluted waters) of eligible Wild and Scenic Rivers, the rivers may no longer be eligible for designation.</p>	<p>Potential for impacts on water quality, free-flowing segments, and outstandingly remarkable values of Wild and Scenic river segments from mining related activities forecast under this Scenario would be more likely than with the other Scenarios. NWP may slightly change stream flows of Soda Butte Creek, Clarks Fork or Stillwater R. Scenic values of Stillwater R. within the study area could be affected.</p>	<p>Potential for impacts on water quality, free-flowing segments, and outstandingly remarkable values of Wild and Scenic river segments from mining related activities forecast under this Scenario would be similar to Scenario A-1. Risks to water quality, free-flowing character, and outstandingly remarkable values of the Stillwater R. would be reduced due to the proposed mineral withdrawal.</p>	<p>Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. Potential impacts on water quality, free-flowing segments, and outstandingly remarkable values of Wild and Scenic river segments would not be anticipated from mining.</p>
	<p>Potential for impacts on water quality, free-flowing segments, and outstandingly remarkable values of Wild and Scenic river segments from mining related activities forecast under this Scenario would be much less than under Scenario A-1.</p>		

wind directions. Up valley and down valley wind patterns develop during summer. Wind dispersion throughout the study area is robust; although, localized inversions can develop over Cooke City and Silver Gate.

**Environmental Consequences.** Table 10 presents a comparison of the environmental effects that may occur with implementation of each scenario.

## Land Uses, Mining, and Private Property

**Affected Environment.** Current land uses in the study area include recreation, small-scale timber harvest, mining, and residential development.

Much of the study area has high development potential for gold, copper, silver, lead, and zinc (Map 6). The mineral potential of the area was recognized in 1869, with the first prospectors arriving soon thereafter. Initially, mining occurred in the Republic Mountain area south of Cooke City, along the Montana-Wyoming state line. During the period 1875-1887, small amounts of lead, silver and zinc were produced. The mines continued to operate until the early 1950's.

Between 1888 and 1930, copper and gold was mined north of Cooke City, at the Little Daisy, Homestake, Glengarry, and Alice E. Mines. The McLaren Gold Mine commenced operation in 1933, and closed in 1953 when its mill burned. By the time mining ceased in the late 1950's, over 3,300 acres of claims had been patented. Exploration activity resumed in the 1960's, concentrating on the potential for porphyry copper-molybdenum deposits. During 1962-73 and during the early 1980's several companies identified gold-copper-silver deposits in the Como area. Crown Butte Mines, Inc., explored the Henderson Mountain area beginning in 1987 and discovered several high-grade gold-copper skarn and replacement deposits. Currently, there are 470 unpatented mining and millsite claims in the area comprising approximately 4,240 acres.

There are 4,160 acres of private land within the study area. With the exception of 794 acres of land that were patented under the Homestead and Cash Entry Acts, and 49 acres for Cooke Townsite, the private land consists of patented mining claims. In addition, there are 470 unpatented mining claims in the study area. Unpatented mining claims are an area of public land held under the 1872 Mining Law on which the U.S. still holds title but the right of exclusive possession is given to the locator of a valuable mineral deposit.

The proposed withdrawal could affect mineral development on private land and unpatented mining claims on



*Mineral exploration, core drilling, near Henderson Mountain.*

federal land; however, such effects are highly speculative and site-specific.

The lack of available federal land for facilities could result in environmentally less preferable development on private land.

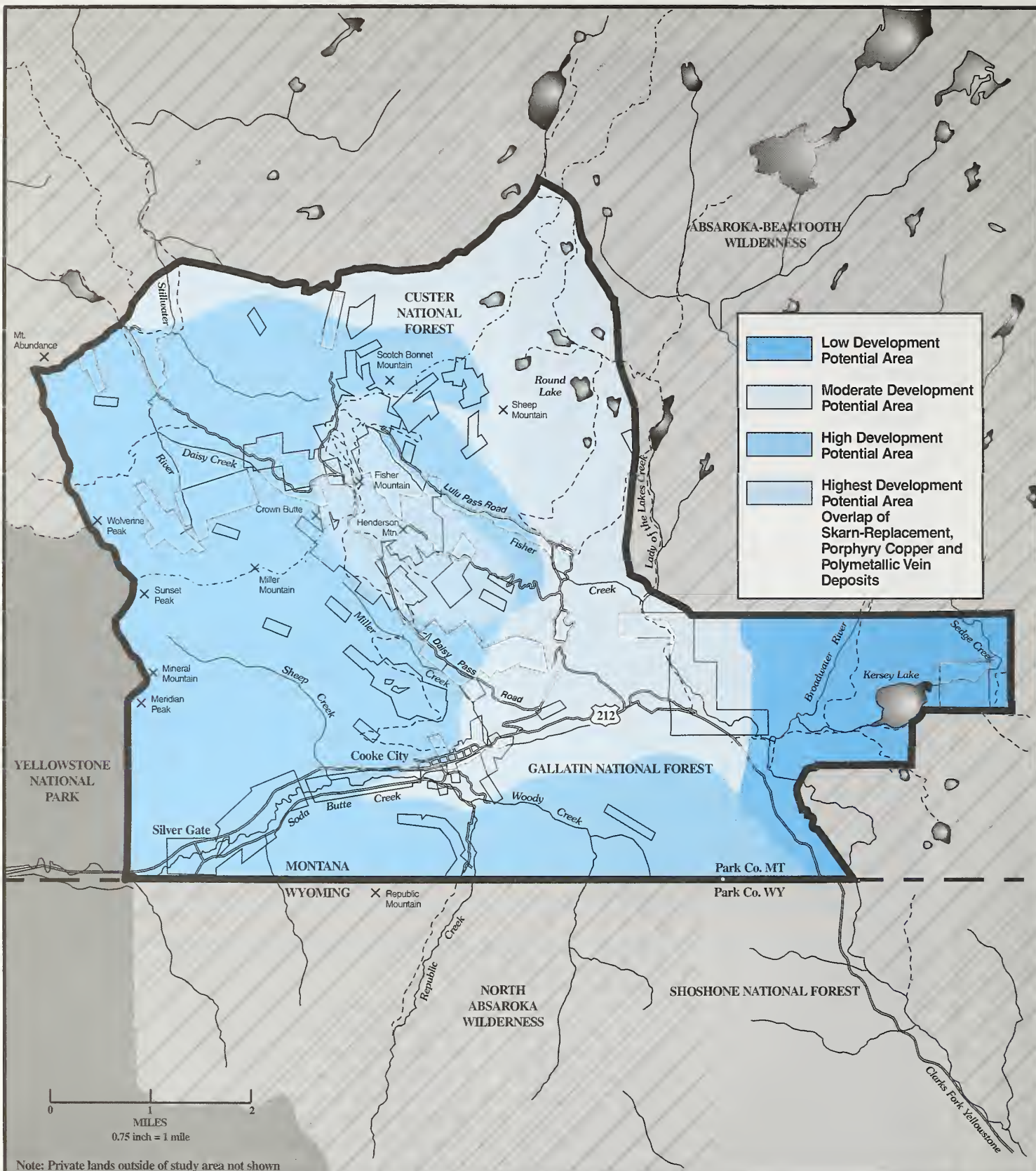
Some comments on the Draft EIS expressed concern that the proposed withdrawal represents a "takings" of private property due to diminished development options and subsequent loss of property value. The Fifth Amendment to the Constitution prohibits the taking of private property without just compensation. The withdrawal does not apply to private land, nor does it affect rights associated with unpatented mining claims. The withdrawal is not a regulation that directly effects the use or value of private property. Ownership of private land does not convey any rights to use of adjacent federal lands. Therefore, the withdrawal does not constitute a takings.

The proposed withdrawal would potentially effect some facility siting options for the New World Project, including



**Table 10. SUMMARY COMPARISON OF EFFECTS TO AIR QUALITY BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST**

Alternative A, No Mineral Withdrawal Scenario A-1: NWM Agreement Not Implemented	Alternative A, No Mineral Withdrawal Scenario A-2: NWM Agreement Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-1: NWM Agreement Not Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-2: NWM Agreement Implemented
Air Quality			
Mining-related effects would vary by Scenario, based on probability of mineral development. General effects of mining related activities would cause particulate and gaseous emissions as well as visibility impacts that would effect overall air quality.			
Potential for particulate and gaseous emissions as well as visual impacts from mining related activities forecast under this Scenario would be more likely than with the other Scenarios. Emissions would likely not exceed Prevention of Significant Deterioration (PSD) or National Ambient Air Quality Standards.	Potential for impacts on air quality from mining related activities forecast under this Scenario would be much less than under Scenario A-1.	Potential for impacts on air quality from mining related activities forecast under this Scenario would be similar to Scenario A-1. Potential for air quality impacts to Yellowstone NP and wilderness areas would be reduced because mining would be concentrated in the center of the study area.	Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. Potential impacts on water quality, free-flowing segments, and outstandingly remarkable values of Wild and Scenic river segments would not be anticipated from mining.



	Yellowstone National Park	Study Area Boundary	<b>MAP 6</b>  <b>MINERAL DEVELOPMENT POTENTIAL</b>
	Wilderness	Streams	
	Private lands (not subject to withdrawal)	Trails	
	National Forest Land	Roads	
		National Forest Boundary	



tailings impoundments and work camps (in the event the NWM Agreement is not implemented).

***Environmental Consequences.*** Table 11 presents a comparison of the environmental effects that may occur with implementation of each scenario.

## Economics

***Affected Environment.*** Economic factors considered in the effects analysis include employment, income, economic structure and resiliency, and government finances.

Industry in Park County, MT, features many small service and retail trade businesses supported by tourism and recreation due largely to its proximity to Yellowstone NP and the location of Livingston on Interstate 90. The largest economic sectors (in terms of earnings) in 1993 were services (28.1 percent), retail trade (15.9 percent), and government (13 percent). Mining comprised about 4 percent of the earned income in the economy.

Industry in the Cooke City/Silver Gate area consists of service and retail trade establishments serving the tourists to Yellowstone NP in the summer, hunters in the fall, and snowmobilers and skiers in the winter. Not all businesses in this area are open year around. Tourists, who are generally travelers on their way to and from Yellowstone NP, are the largest sources of Cooke City area business revenues. They account for 31 percent of total business revenue. Outdoor recreationists (whose primary destination is the Cooke City/Silver Gate area and the surrounding Wildernesses) account for 39 percent of the total business revenue. Economic activity in the Cooke City/Silver Gate area is constrained by limited access to the area in the winter. This isolation has contributed to the development of a seasonal economy, high transportation costs, and a relatively high cost of living.

Cody, the county seat of Park County, WY, is a major center for tourism in northwestern Wyoming. It is the nearest major community to the east entrance to Yellowstone NP. The economic sectors with the most earnings in Park County, WY, in 1993 were government (23 percent) services (18.5 percent), mining/oil and gas (14.5 percent, primarily from the oil and gas industry), and retail trade (11.8 percent).

The largest industry in the services sector is health services (27.8 percent). The lodging industry places second at 22.0 percent, which is more than twice the state average for this industry. The eating and drinking industry is about 25.1 percent of the retail sector, which is approximately the same as the state percentage.

The local and regional economies have been rapidly growing in recent years; employment, wages, population and housing demand have increased. Growth has centered on tourism and recreation, and is expected to continue with or without mining.

If mining were to occur, it is likely that employment and income would be directly affected. Each exploratory drilling operation would employ up to 10 seasonal workers and would be in operation for a 2 to 3 year period. Using the New World Project as an example, anticipated peak employment from mining would be about 320 jobs in the second year of operation. Direct employment would tend to stabilize at approximately 180 workers by the third year and continue until project completion (8 to 15 years). After mining operations cease, direct employment during closure and reclamation would drop to about 10 people. Activity in mining also creates indirect employment opportunities when mining firms and their employees spend money for goods and services.

Mining-related jobs are generally higher paying jobs, while service jobs are at the lower end of the pay scale.

***Environmental Consequences.*** Table 12 presents a comparison of the environmental effects that may occur with implementation of each scenario.

## Social

***Affected Environment.*** The social environment of an area is defined by a wide variety of factors such as social organization, leadership, lifestyles, values, and expectations. Quality of life is also an important consideration and can encompass the factors above, as well as a variety of elements such as clean air, clean water, recreational opportunities, area aesthetics, etc. It is also influenced by elements of the standard of living, such as economic opportunity and comforts.

Due to its proximity to the study area, the Cooke City/Silver Gate community (93 permanent and 318 seasonal residents in 1991) would feel the greatest social impact of mining or a mineral withdrawal. Other communities that could be affected include Cody (population 7,900) and Powell (population 5,290) in Park County, WY, and Livingston (population 7,410) and Gardiner (population 511) in Park County, MT.

Park County, Montana, has a long history of natural resource uses. The area's rich mineral deposits, spectacular scenic beauty, high quality outdoor recreation, and proximity to Yellowstone NP have been and continue to be factors

**Table 11. SUMMARY COMPARISON OF EFFECTS TO LAND USES, MINING, AND PRIVATE PROPERTY BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST**

Alternative A, No Mineral Withdrawal Scenario A-1: NWM Agreement Not Implemented	Alternative A, No Mineral Withdrawal Scenario A-2: NWM Agreement Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-1: NWM Agreement Not Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-2: NWM Agreement Implemented
Land Use Change			
Potential metal production from known mineral reserves (New World Project) could include 2.3 MM oz. of gold, 8.8 MM oz. of silver, and 132 MM lb. of copper. Speculative production could include 2.6 MM oz. of gold, 10.0 MM oz. of silver, and 179 MM lb. of copper.	There would be no metal production from known mineral reserves. Speculative production could include 2.6 MM oz. of gold, 10.0 MM oz. of silver, and 179 MM lb. of copper.	Potential metal production would be the same as with Scenario A-1.	No metal production would be anticipated.
New World Project Alternative would not be affected. Additional options could be developed on federal land available for mineral entry.	The New World Project would not be developed due to the NWM Agreement.	Three alternatives and other options for development and/or mitigation would be unavailable because of the mineral withdrawal. Alternative locations for sites on private land may be less environmentally desirable.	The New World Project would not be developed due to the NWM Agreement.
Private Land and Unpatented Mining Claims would not be affected.	The NWM Agreement may affect development of private land interspersed with interests acquired under the NWM Agreement.	Development of private lands and unpatented federal mining claims may be affected by lack of available lands for mine facilities.	Mining development of remaining lands may be affected by the lack of available land for facilities.



Table 12. SUMMARY COMPARISON OF EFFECTS TO THE ECONOMIC ENVIRONMENT BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST

Alternative A, No Mineral Withdrawal Scenario A-1: NWM Agreement Not Implemented	Alternative A, No Mineral Withdrawal Scenario A-2: NWM Agreement Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-1: NWM Agreement Not Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-2: NWM Agreement Implemented
<b>Economics</b>			
<p>Mining-related effects would vary by Scenario, based on probability of mineral development; however the following contains a description of general economic effects of mining. Employment and income would peak during mine development, decline slightly and level off during mine operation. Temporary jobs would be created by exploratory drilling operations, powerline construction, work camp construction, mine reclamation, plowing highways in the winter, building homes for employees, and highway maintenance. Costs to local governments would increase with increased demand for services as workers move to the area. Montana county and local budgets may be balanced by increases in tax base or by offsets that result from the Montana Hard-Rock Mining Economic Impact Act and the Proper Tax Based Sharing Act. County and local governments in Wyoming may experience budget shortfalls. Mining would increase economic diversity but not economic dependency. Mining and year-round access between Cody, WY and Cooke City, MT would tend to stabilize the Cooke City economy while the mine(s) operate. The level of economic impacts would depend on the number and size of mines developed.</p>		<p>The likelihood of mining and related economic impacts would essentially be eliminated.</p>	
<p>Potential for economic impacts from mining related activities forecast under this Scenario would be more likely than with the other Scenarios.</p>	<p>The potential for mining-related economic impacts would be significantly reduced since the area of highest mineral development potential would be unavailable for mining due to the NWM Agreement.</p>	<p>Mining related economic impacts would be similar to Scenario A-1 due to anticipated development of the NWM.</p>	

shaping the history of the area. Residents and visitors are attracted to the area by the spectacular scenery, abundant wildlife, unique geologic features, and solitude.

Cooke City's early economy was based on mining but shifted to tourism and recreation in the 1930's. The founding of the community of Silver Gate, one mile from Yellowstone NP, in 1936 stimulated tourism. By 1937, there were 59 cabins, a gas station, a tavern, and a few stores in Silver Gate.

Residents of Cooke City and Silver Gate include both permanent full-time and seasonal residents. Seasonal residents come to the area during the summer months for vacation or retirement purposes. They often have outside income sources, such as retirement or investments. Permanent residents generally depend on area resources to make a living. This dependence includes not only extractive industries, such as mining, but also a high level of service-oriented recreation and tourism business. Both year-round and seasonal populations of Cooke City and Silver Gate have shown remarkable longevity and stability. Seasonal residents have been in the community an average of 25 years, six years longer than year-round residents.

Both permanent and seasonal residents perceive social class distinctions based on period of residency. Business owners and merchants generally are perceived as having more influence than are nonproperty owners who frequently work at temporary jobs. Local residents perceive that they have little control over important decisions such as the allocation of tax revenues, development of mining, and provision of community services. They feel these decisions are made by individuals or agencies over which they have no influence. There is a general perception that Cooke City and Silver Gate are largely ignored by county government, because the area has few voters and is very distant from the county seat.

Other factors contribute to the feeling of lack of control. For example, tourism and recreation, major sources of community income, are dependent upon visitors who often come from outside of the region or the state. Visitation levels depend upon the seasonal attractiveness of Yellowstone NP, weather, gasoline prices and other factors outside of the communities' influence. Commercial access to Cooke City and Silver Gate in the winter is totally controlled by Yellowstone NP.

Surveys done by Crown Butte (1990) and Corkran (1993) revealed that opinion about mining development was divided among area residents. The Crown Butte survey revealed that while some residents felt that the New World Project would build the economy, others expressed concerns about the short-term positive effects of mining, loss of snowmobile trails, mobile home placement among existing

housing, mobile home park developments, and displacement of seasonal help and tourists due to mining personnel occupying existing housing units. Corkran's survey revealed that of year-round residents responding to the survey, 54.6 percent rated the development of mining as "Not Important" to the future success of the community. Of seasonal residents, 67.5 percent responded in a similar manner.

Concern about development of this area is not just a local issue; it is regional and national in scope. Those in favor of mineral development cite the known valuable mineral reserves, the mining history of the area, the economic benefits, and the laws and technology that are in place to protect the environment. Those opposed to mining cite the risk to outstanding resources in the area and question whether an industrial activity like mining is appropriate in this setting.

***Environmental Consequences.*** Table 13 presents a comparison of the environmental effects that may occur with implementation of each scenario.

## Cultural

***Affected Environment.*** Human occupation of the area spans approximately 12,000 years. The study area, in the higher elevations of the Beartooth Mountains, participated in the prehistoric cultural development which characterizes south central Montana and adjacent Wyoming. This region supported a long series of occupations by small, mobile hunting-gathering groups who entered the area about 12,000 to 10,000 years ago.

Shoshone peoples moved into the area from the southwest beginning around 1400 A.D.. About 1700 A.D., the Crow came in from the east. Horses were introduced to Plains hunting groups by about 1725 and by 1775 most groups had horses. Although the Shoshone were apparently the first Northwestern Plains group to acquire the horse, one branch of Shoshone, which early accounts put in Yellowstone NP and the Beartooth Mountain Range, lacked horses and guns and lived in brush and pole shelters. Called Sheepeaters because mountain sheep were a main source of food, this group is thought to be a mixture of Shoshone and Bannock. These peoples left the Park in the 1870's to join the Shoshone on the Wind River Reservation in Wyoming.

The New World Historic District was established to protect the historic resources associated with mining from 1869 to 1942. The Historic District consists of 83 historic properties, of which 43 contribute to its designation as a National Register District. The 43 contributing sites consist of towns, mines, mills, smelters, cabins and other mine features.



Table 13. SUMMARY COMPARISON OF EFFECTS TO THE SOCIAL ENVIRONMENT BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST

Alternative A, No Mineral Withdrawal Scenario A-1: NWM Agreement Not Implemented	Alternative A, No Mineral Withdrawal Scenario A-2: NWM Agreement Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-1: NWM Agreement Not Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-2: NWM Agreement Implemented
<b>Social</b>			
<p>Mining-related effects would vary by Scenario, based on probability of mineral development; however the following contains a description of general social effects of mining. Population would increase by about 50 permanent residents in the Cooke City/Silver Gate, MT area and by an estimated 360 to 1,290 permanent residents per mine in Park Co., MT, and Park Co., WY. Population increases would also occur from employment related to other activities. Demand for housing, schools, emergency services, domestic water, wastewater and solid waste disposal, and social services would increase, especially in Cody and Powell, WY. Some infrastructure has little or no room to absorb the growth. Added tax revenues could fund new services or improve existing facilities or services. However, this would be more likely in Park County, MT than in Park County, WY. Mining would alter the social character and quality of life in Cooke City and Silver Gate, especially for long-term residents. Some social and cultural values would also change. The level of social impacts would depend on the number and size of mines developed.</p>			
Potential for social impacts from mining related activities forecast under this Scenario would be more likely than with the other Scenarios.	The potential for mining-related social impacts would be reduced due to the NWM Agreement.	Social impacts would be similar to Scenario A-1 due to the development of the NWM.	Social impacts related to mining would probably be avoided. Social change would continue as the local communities grow, but at a much slower rate than if mining occurred.

**Environmental Consequences.** Table 14 presents a comparison of the environmental effects that may occur with implementation of each scenario.

## Wildlife

**Affected Environment.** The study area is rich in terms of biodiversity. The area has few human inhabitants and is adjacent to large expanses of undeveloped lands. This provides habitat for animals requiring minimal contact with humans, and/or large diverse home ranges where movement corridors are intact. Furthermore, the area is adjacent to Yellowstone NP which is internationally known for its free-roaming herds of bison and elk and endangered species, such as the grizzly bear and the gray wolf.

According to the US Fish and Wildlife Service, threatened and endangered species that may occur in the study area include grizzly bear (resident), gray wolf (resident, transient), bald eagle (resident, transient), and peregrine falcon (resident migrant).

At this time, there is no ongoing wolf pack activity in the study area; although, wolves may occasionally pass through the area. Bald eagles are residents and winter visitors to the area. Suitable nesting habitat may occur and foraging habitat is present within the study area; however, there are no known nest sites. Peregrine falcons are considered uncommon in this area. There are abundant suitable cliff nest sites, but much of the study area is still covered with deep snow during the nesting season and is not considered attractive to nesting peregrines.

A self-perpetuating grizzly bear population exists within the Greater Yellowstone Area. Trend data indicates the grizzly bear population is increasing following a decline caused by the closure of garbage dumps in 1970-1971, in concert with other factors. The majority of grizzly bear mortalities since 1974 are attributable to human-related incidents, such as shootings and management control actions. Almost half of the mortality risk is associated with people carrying firearms on National Forests. Known and probable grizzly bear deaths tend to be centered around specific areas in and around Yellowstone Park, such as gateway communities of West Yellowstone, Cooke City and Gardiner, as well as certain recreational developments, sheep grazing allotments, and other human concentration areas.



*Grizzly bears.*

The habitat considered essential for recovery of the grizzly (Management Situation 1) within the study area is underutilized by grizzly bears because of present levels of human activity and past levels of grizzly bear mortality. The area around Cooke City and Silver Gate is considered a population sink (an area that brings grizzly bears into contact with humans often resulting in removal of bears from the population). The number of human-caused grizzly bear mortalities is positively correlated with increased human access and activity and the resulting increased contact between bears and humans.

FS Northern Region Sensitive species (species for which population viability is a concern) that may be present in the area include eight animals (Townsend's big-eared bat, wolverine, lynx, spotted bat, common loon, harlequin duck, boreal owl, black-backed woodpecker) and nine plants (Pink agoseris, large-leaved balsam root, slender paintbrush, parrot-head Indian paintbrush, hiker's gentian, northern rattlesnake plantain, discoid goldenweed, Hall's rush, and Wolf's willow).

Moose, elk, mule deer, bighorn sheep, and mountain goats live in the study area. Existing use of the study area by bison is restricted to a few incidents in the late summer and early fall.

**Environmental Consequences.** Table 15 presents a comparison of the environmental effects that may occur with implementation of each scenario.



**Table 14. SUMMARY COMPARISON OF EFFECTS TO CULTURAL RESOURCES BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST**

Alternative A, No Mineral Withdrawal Scenario A-1: NWM Agreement Not Implemented	Alternative A, No Mineral Withdrawal Scenario A-2: NWM Agreement Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-1: NWM Agreement Not Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-2: NWM Agreement Implemented
Cultural			
Mining-related effects would vary by Scenario, based on probability of mineral development. General effects of mining related activities could include damage or alteration to individual cultural sites. Increased use of the area or improved access to sites could also result in damage to sites and loss of the integrity of the New World Historic District (NWHHD).			
Potential for impacts from mining-related activities forecast under this Scenario would be more likely than with the other Scenarios. Activities would affect the integrity of the NWHHD.	Potential for impacts on cultural resources and especially the integrity of the NWHHD from mining related activities forecast under this Scenario would be much less than under Scenario A-1.	Potential for impacts on cultural resources, especially the integrity of the NWHHD from mining related actions forecast under this Scenario would be similar to those with Scenario A-1. Mineral development in the NWHHD would be likely.	Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. Potential impacts on cultural resources, especially the integrity of the NWHHD would not be anticipated from mining.

**Table 15. SUMMARY COMPARISON OF EFFECTS TO WILDLIFE RESOURCES BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST**

Alternative A, No Mineral Withdrawal Scenario A-1: NWM Agreement Not Implemented	Alternative A, No Mineral Withdrawal Scenario A-2: NWM Agreement Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-1: NWM Agreement Not Implemented	Alternative B, Mineral Withdrawal Implemented Scenario B-2: NWM Agreement Implemented
<b>Wildlife</b>			
Mining-related effects would vary by Scenario, based on probability of mineral development. General effects of mining related activities could cause loss of wildlife habitat, including grizzly bear habitat. Human caused mortality could also result from mining related activities.			
Potential for impacts from mining-related activities forecast under this Scenario would be more likely than with the other Scenarios. Mineral activities in the high development potential areas could affect grizzly bear core habitat areas, elk and moose winter range, mountain sheep summer range, and mountain goat range.	Potential for impacts on wildlife habitat and populations from mining-related activities forecast under this Scenario would be much less than under Scenario A-1. Grizzly bear core habitat would remain available for mineral development.	Grizzly bear core habitat areas, elk and moose winter range, most mountain sheep summer range, and most mountain goat range would be withdrawn from mineral entry. Mining anticipated in central portion of study area would result in effects similar to Scenario A-1 if human activity and recreation use increases in important wildlife habitats.	Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. Potential impacts on wildlife habitat and populations would not be anticipated from mining.



## CONSULTATION AND COORDINATION

### SUBSTANTIVE CHANGES BETWEEN THE DRAFT AND FINAL EIS

The “CHRONOLOGY OF PUBLIC PARTICIPATION ACTIVITIES” has been modified to include activities that have occurred since the Draft EIS was released to the public.

A new section that summarizes public comments received on the Draft EIS was added.

A new section regarding distribution of the Final EIS was included.

## PUBLIC NOTICES, EXTERNAL AND INTERNAL SCOPING

The lead agencies for this environmental analysis are the U.S. Department of Agriculture and the U.S. Department of the Interior. The agencies used an interagency interdisciplinary team to prepare the analysis documented in the EIS and this summary. Included in the team were members from the Northern Regional Office of the Forest Service; the Custer, Gallatin, Flathead, Kootenai, and Clearwater National Forests; and the Bureau of Land Management Montana State Office. The following “Chronology” summarizes the public participation activities that have been a part of the process to prepare the environmental impact statement.

### CHRONOLOGY OF PUBLIC PARTICIPATION ACTIVITIES (AGENCIES AND GENERAL PUBLIC)

#### 1995

Sept 1      *Federal Register* Notice of Proposed Withdrawal : Montana

#### 1996

May 31      *Federal Register* Notice to prepare an Environmental Analysis and public meetings.

June 7      News Release announcing start of project.

June 1      Week of June 10, telephoned initial key contacts, claim holders, environmental organizations, mining industry representatives, MT and WY State government contacts.

June 14      Letter to more than 1,000 people announcing project.

June 18      - Interviewed by Bureau of National Affairs, for Daily Env. Report.  
- Briefed Senator Max Baucus’ staff (Sharon Peterson) and Congressman Pat William’s staff (George Parisot)

June 19      Met with Montana Mining Association.

June 20      Briefed Senator Burns’ Staff (Kathy Sparr).

June 28      Briefed representatives from Greater Yellowstone Coalition, Northern Plains Resource Council, Sierra Legal Defense Fund, Montana Environmental Information Center.

July 8      Issued News Release announcing meetings to media.

July 10      Scoping letter sent to complete mailing list, including Montana and Wyoming State government officials.

July 15      Red Lodge meeting (45 attended).

July 16 Cooke City meeting (105 attended).

July 17 - Cody meeting (35 attended).  
 - Briefed Wyoming Senator Simpson's Staff (Karen McCreery).  
 - Letter to other NF and BLM Offices, Federal and State agencies, Indian Tribes, County Commissioners announcing interagency/intergovernmental scoping meeting to be held July 25, 1996.

July 18 Livingston Meeting (55 attended).

July 25 Agency scoping meeting attended by representatives from National Park Service; U.S. Fish and Wildlife Service; Montana Fish, Wildlife and Parks; Montana Department of Fish, Wildlife and Parks; Gallatin National Forest; Montana State Office, BLM; Custer National Forest; and Park County, Montana.

Aug 5 Letter to tribes requesting comments and concerns by September 6.

Aug 8 - Provided initial telephone briefing about project to Crow Tribe Official and solicited response regarding concerns about the effect of the project on any traditional Crow cultural properties in the study area (John Pretty On Top, Crow Cultural Committee).  
 - Provided initial telephone briefing about project to Shoshone Bannock Tribe Official (Randy Thompson, Cultural Committee).

Aug 19 - Telephone discussion with Shoshone Bannock Tribe Official (Diana Yupe) to answer questions about the project, and to solicit response regarding concerns about the effects of the proposed project on any traditional Shoshone Bannock cultural properties in the study area.  
 - Contacted Shoshone Tribe (Ivan Posey) to provide initial briefing about the proposed withdrawal and to solicit response regarding concerns about effect of the project on traditional Shoshone cultural properties in the study area.  
 - Contacted Arapaho Tribe (Francis B. Brown, Arapaho Cultural Committee) to provide a briefing about the proposed withdrawal project and to solicit response regarding concerns about the effect of the projects on traditional Arapaho Tribe cultural properties in the study area.

Sept 20 Notice of Amendment to Proposed Withdrawal.

Sept 26 Briefed Senator Burns' Office (Dwight McKay).

Sept 27 - Briefed Senator Baucus' Office (Marilyn Kramer).  
 - Phoned Jim Magagna, Wyoming Director of Federal Land Policy; Offered to brief Wyoming State Government officials.  
 - *Federal Register* Notice of meetings and Notice Of Intent to prepare an EIS.

Sept 30 Letter to approximately 700 people, giving update on status and announcing meetings.

Oct 1 Briefed Cooke City Chamber of Commerce

Oct 8 - Briefed officials from Montana Department of Environmental Quality.  
 - Provided a phone briefing of Senator Simpson's staff and Congresswoman Cubin's staff.

Oct 10 Responded to request for budget information from Senator Burns' staff (Dwight McKay).

Oct 11 News Release announcing meetings and current status.

Oct 13 - Open House in Cody (12 attended).  
 - Letter to 383 property owners within the withdrawal study area providing background and update.

Oct 24 Open House in Livingston (24 attended).



- Nov 18-26 Letters to Yellowstone National Park, USGS, USF&WS, EPA, and CEQ inviting their participation in the review of the PDEIS.
- Nov 26 Briefed Wyoming Congressional delegation, key staff members, Jim Magagna (WY Commissioner of Public Lands), and others from WY state government.
- Dec 10 Washington, D.C., briefing for Environmental Protection Agency, Bureau of Land Management, Department of Justice, Department of Agriculture, Department of the Interior, and Forest Service

**1997**

- Jan 1 Federal Interagency review of Preliminary Draft EIS by Yellowstone National Park, EPA, CEQ, DOJ, USFS, BLM, USF&WS, NPS, USGS
- Feb 18 Briefed Regional Forester and staff at the Regional Forester's Office in Missoula, MT.
- March 5 Briefed Sweet Grass County Commissioners
- March 6 Sent letters and briefing packets to Governor Racicot, Governor Geringer, Senators Burns, Baucus, Thomas, Enzi, Congressman Hill, Congresswoman Cubin, and Key Montana legislators
- March 7
  - Briefed Montana Senators Baucus' and Burns' staffs in Billings
  - Briefed Montana Congressman Hill's staff in Billings
  - Issued a press release announcing the availability of the Draft EIS and public meetings.
- March 10
  - Briefed Wyoming Senators Thomas' and Enzi's and Wyoming Congresswoman Cubin's staffs in Cheyenne
  - Delivered a briefing packet to Wyoming Governor Geringer's staff
  - Delivered a briefing packet to Montana Governor Racicot's staff
- March 11 Briefed Park County, Wyoming County Commissioners
- March 13 Briefed officials from the Montana Department of Environmental Quality, Fish Wildlife, and Parks, and the Governor's Office
- March 14 Federal Register Notice of Availability and Notice of Public Meetings
- March 18 Briefed Park County, Montana County Commissioners
- March 21 Issued a press release announcing upcoming public meetings.
- April 1 Briefed BLM employees at the Montana State Office
- April 2 Held public open house in Cooke City (22 attended)
- April 3 Held public open house in Livingston (32 attended)
- April 8 Spoke at the Natural Resources Roundtable (Billings)
- April 9 Held public open house in Cody (26 attended)
- April 10 Held public open house in Red Lodge (22 attended)
- April 28 End of public comment period (208 comments received)
- May 7 Briefed Regional Forester and staff at Regional Forester's Office in Missoula, MT,
- May 28 Briefed Associate State Director (BLM) and staff at Montana State Office, Billings, MT.

## DISTRIBUTION AND REVIEW OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT AND SUMMARY

Copies of the Draft EIS (or the EIS Summary) were mailed to over 900 persons, groups, local governments, and agencies that have expressed an interest in the project.

Copies of the Draft EIS were made available for review at the following locations:

- Northern Region Office, U.S. Forest Service, Missoula, Montana
- Bureau of Land Management, Montana State Office, Billings, Montana
- Bureau of Land Management, Wyoming State Office, Cheyenne, Wyoming
- Custer National Forest, Supervisor's Office, Billings, Montana
- Gallatin National Forest, Supervisor's Office, Bozeman, Montana
- Helena National Forest, Supervisor's Office, Helena, Montana
- Shoshone National Forest, Supervisor's Office, Cody, Wyoming
- Beartooth Ranger District Office, Red Lodge, Montana
- Gardiner Ranger District Office, Gardiner, Montana
- Livingston Ranger District Office, Livingston, Montana
- Environmental Protection Agency, Denver, Colorado
- Yellowstone National Park, Mammoth, Wyoming
- Bureau of Land Management, Worland District Office, Worland, Wyoming
- Bureau of Land Management, Cody Resource Area Office, Cody, Wyoming
- Local public libraries in Cody, Billings, Bozeman, Livingston, Red Lodge, and Powell

## PUBLIC COMMENTS ON THE DRAFT EIS

The official public comment period for the Draft EIS closed on April 28, 1997. The team received 208 written responses that met the deadline. A handful of letters arrived after the April 28 postmark.

## Content Analysis Process

Content analysis is a process of extracting substantive comments for consideration in the preparation of a subsequent analysis or document. For this analysis, comments were extracted from the letters and entered into one of 14 major categories based on resource or planning process-related issues.

For the "Comment Summary," the comments were then grouped into five major topic areas: Social and Economic Issues, Environmental Effects, Mining and Minerals, The Planning Process and the Proposed Mineral Withdrawal, and the New World Project. Presented below is a brief summary of the comments received on the Draft EIS. The actual text of the extracted comments and questions, and the agencies' responses are presented in Appendix I, "Public Comment on the Draft EIS and Agencies' Responses," of Final EIS.

## Comment Summary

### SOCIO-ECONOMIC ISSUES

#### Social:

Commentors who wrote about the "quality of life" of those who live and recreate in the Cooke City/Silver Gate area expressed concerns about potential impacts on the social structure of the communities and the area. Many also wrote about their concerns for the area resources that combined to make this a "special place."

*"...the withdrawal will help to preserve the social structure, character, and quality of life now stable in our small communities. Large-scale mining would bring destructive rapid growth beyond that which we can tolerate and still maintain our cultural integrity."*

*"There is no question that quality of life would deteriorate with increased traffic, housing sprawl, boom and bust entry and exit from communities, demands on current infrastructure and government services."*

*"It is a source of enjoyment for those seeking peace and quiet and a chance to 'get away' from noise and crowds. A place to marvel at the beauty of nature—which is much more precious than gold, by far!"*

Some commentors also expressed concern about the potential of government "takings" as a result of diminishing their ability to develop their private land or patented mining claims for mineral production. Some commentors also expressed concern about the role of "politics" in the withdrawal proposal.



*"Your decision will violate Constitutionally protected property rights. Such decisions should not be made for political reasons."*

*"If the withdrawal occurs, what does the withdrawal do to the value of the inholdings, how are the owners compensated for any decrease in such value, and which agency of the federal government is responsible for payment for such 'takings'? If this withdrawal is approved the private claims outside of the Crown Butte holdings will be rendered useless because of the inability to use the joining land."*

*"A withdrawal would set a dangerous precedent for taking public and private lands away."*

Others expressed concern about the effects of mining in the area and presented their perceptions of how these federal lands "should" be managed to benefit the public.

*"In addition, mining would result in a sudden and drastic alteration of the social fabric and character of the Cook City/Silver Gate communities; that which attracted most of the year-around and seasonal residents originally."*

*"Equally important, the withdrawal will help to preserve the social structure, character, and quality of life now stable in our small communities. Large-scale mining would bring destructive rapid growth beyond that which we can tolerate and still maintain our cultural integrity."*

*"Mineral development, and all that it entails, in this area contradicts the very reasons that most of us live in and others visit the area."*

*"Our public lands should be protected for all of our enjoyment, and the habitat that we save will be able to be shared forever, with our friends, tourists, children, and the wildlife."*

*"These lands are owned by all the people of the United States and to risk the potential problems associated with mining in the proposed area is not worth the insignificant revenue which the project would generate for the owners (the people)."*

### **Scenic Value:**

While "scenic integrity" is evaluated as a part of recreation resources, many commentators expressed concerns for scenic values in a social context.

*"...with a knowledgeable eye the study area is plainly visible from the summit of the Beartooth Pass, the*

*Scenic View of Sunlight Basin and Pilot Overlook and by the aspen grouping above the intersection. This would be visible to the uneducated eye very dramatically if it were lighted, which could happen. As far as I am concerned mining in this area would be devastating to the pristine, untouched, overwhelming view that now exists."*

*"Maintaining the high quality of the scenery in the area is critical. While the scenic quality in portions of the analysis area has already been degraded by previous mining operations, we hope that the long term cleanup effort will at least improve some of the currently visible scars."*

Conversely, others commented:

*"Montana's laws provide for cleanup of old problems through permitting of new operations, with no cost to the public. The area would have higher visual values after a permitted mining operation than what presently exists."*

### **Special Management Areas:**

Many commentators who wrote in favor of the withdrawal proposal expressed their attachment to Yellowstone, the nation's first national park, and their concerns about protection of the entire surrounding ecosystem. The perception among many of those who commented is that Yellowstone National Park appeals to a nationwide, as well as an international audience, and that protection of the study area is integral to protection of the Park.

*"One of the world's greatest natural treasures is imperiled by this mining. Nothing you can do legally is enough..."*

*"I believe that it should be emphasized that this is a location in the midst of spectacular designated wilderness areas and very near to one of the world's natural jewels, Yellowstone National Park."*

*"Mining in this area is a threat to Yellowstone National Park and should not take place so near the park's boundaries."*

*"The proposed action will best protect the water and air quality, wildlife and the natural wonders of Yellowstone National Park from degradation."*

*"This area is an important buffer zone for Yellowstone National Park and the Wilderness areas which surround us."*

Others, who opposed the withdrawal proposal, commented that mining in the study area would have little effect on Yellowstone National Park.

*"No commercial traffic going to the mine is allowed to cross the Park. There are two mountain ridges between the mine development and the Park. None of the mineral development could be seen from the Park. Mining would have little effect upon Yellowstone Park."*

### **Recreation and Tourism:**

Some commentators addressed the effects of tourism in terms of benefits to the local economy provided by tourists who come to enjoy the splendor of the scenery. Others asked the interdisciplinary team to consider that tourism also may have a "downside" in that those who visit and recreate in the area may create negative impacts on the land.

*"The present tourist economy would be severely affected and mining has always been short-term, which usually ends up being economically disastrous."*

*"The area has also been, and is, extensively used by various multiple use groups which affect the ecosystem. Such uses include trailbikers, hunters, horsemen, campers, cross-country skiers, snow-mobilers. A more detailed analysis of the impact of these types of use must be made for comparison of that of mining on the fish, fowl and wildlife of the area."*

*"Page 137 - States that recreation and tourism is a nonconsumptive use. I would disagree the recreation is a nonconsumptive use. Tourists are among the most consumptive users of resources. The notion that tourism and recreation are nonconsumptive uses of land is one that needs to be rethought. The impacts are wide ranging and sometimes irreversible."*

### **Economics:**

Comments on economics ranged from those which expressed the need for the good paying jobs that come with and support mining activities, to those which expressed concern that mining-related activities would keep tourists and other recreationists away, thus affecting the livelihoods of those who now own or are employed in tourist-dependent businesses in the area.

*"So many young people need a job that pays enough for them to raise a family, they cannot do this working at Hardee's or Burger King. Please help to stop all this foolishness and let some of our people stay in MT."*

*"The true and untouched areas are nice, but they sure don't put food on the table and they are not supporting*

*our business throughout the winter, where for four months in small towns you can close your doors and be better off."*

*"...we can attest to the economic necessity of preserving the scenic, aesthetic, wildlife, and recreation values that form the lifeblood of our sustainable tourism industry. The mineral withdrawal would provide a very positive impact to our local tourism and recreation economy."*

Other commentators expressed concern for the loss of revenue to surrounding cities and counties if the mining industry leaves the region.

*"Without the mine, Montana stands to lose many millions of dollars in revenue. With the oil industry paying less in revenue each year in Park county, Wyoming, we need more, not fewer, businesses."*

*"Curtailing mining production also has significant impacts on local school districts and county tax bases. For example, Park County will lose over 1.2 million dollars in five years of projected revenue from the actions taken to prevent Crown Butte's operation. There are similar impacts in Sweet Grass County."*

Some commentators expressed their concerns about the need to provide minerals to the marketplace to meet the needs of technology and the demands of society.

*"Recovery of minerals is such an essential part of America's economy and National well-being."*

*"We need many metals in our life style today."*

Several others addressed the potential effects the withdrawal could have on future investments in mining exploration and development in the United States.

*"...the ripple effect from the situation surrounding this particular withdrawal is having a chilling effect on domestic investment for new mineral production."*

Tied into economics and the pros and cons of mineral exploration came comments on the historical uses in the New World Mining District.

*"I also oppose the closing of public land from mineral exploration and mining activity in an area that is known to contain mineral deposits and which encompasses four historic mining districts for national security reasons."*

*"The entire area has historically been in the mining district with extensive mining."*



*"The Cooke City area is an historical mining area and has numerous known mineral deposits which can be obtained in a responsible mining effort."*

## ENVIRONMENTAL EFFECTS

### Water:

The majority of the comments in this category dealt with water quality and what might happen to rivers and creeks in the area as a result of mining. Some expressed concern that mining would destroy water quality; others wrote that mining, and the reclamation efforts that are integral to mining operations, might improve water quality through clean up of existing sources of pollution to area streams. Some commentators pointed out the sufficiency of laws and regulations and agency responsibilities that already exists to take care of water quality.

*"Your study assumes mining will destroy the water quality, the fishery, the wetlands, the wildlife, the recreation and the whole area, when it is just as possible that with today's [sic] known technology and regulations, mining will produce better quality water than exists today."*

*"The effects of future hardrock mining, that could occur on federal lands if mineral withdrawal is not accomplished, include increased acid-rock drainage, the potential for ground-water contamination, the potential hazards from failure of tailings impoundments."*

Several letters noted that some mineralization in the stream water is naturally occurring and that mineralization of these streams has been going on for thousands of years..

*"The fact is the area contains ferrocrete zones that started to form with the retreat of the glaciers. Many streams have low pH levels and cemented, lifeless streambeds from natural erosion of mineral deposits enhanced from early mining operations. Many of those 'pristine' waters and soils contain elevated metal levels because of the deposits in their origins."*

### Wildlife:

A number of letters expressed concern for maintaining habitat for bison, grizzly bears, wolves, and other wildlife species. One person reported noticing a decrease in the moose population and asked if a loss in habitat in the withdrawal area might not hasten that decline.

*"...Bald eagles, Peregrine falcons, Grey wolves, Wolverine and Lynx. Mining activity could have a significant negative impacts on these recovering species."*

*"I speak for the animals when I say they do not want their home turned into a mining site. We can't keep pushing them into a smaller and smaller area."*

In contrast, one person wrote:

*"As demonstrated at other Montana mines, each mine site, because of permit restrictions and safety is closed to hunting and public incursion. The sites become wildlife preserves causing far less impact on the wildlife than the public recreation areas."*

### Wilderness:

Issues raised about potential effects of mining on the Wilderness areas was divided. Some commentators noted the project's proximity to the Absaroka-Beartooth and North Absaroka Wilderness, and addressed the need for the withdrawal to protect those areas. Others noted that Congress had deliberately left the New World Mining District out of wilderness designation because of its mineral potential.

*"The Absaroka-Beartooth Wilderness is the most heavily used wilderness area in the Northern Region, with 514,000 Recreation Visitor Days of use in 1995. Outside designated wilderness, the non-designated roadless lands are critical to the ecological functioning of the wilderness areas. The public has identified protection of the pristine wilderness character of this area as its highest and best use."*

*"Mining and wilderness are incompatible."*

*"The proposal is contrary to the intent of Congress when it passed the Absaroka Beartooth Wilderness Act in 1978 in that the New World Mining District was specifically excluded from the Act because of the minerals potential."*

*"Mining activity 'could be visible from wilderness areas near Yellowstone NP'? We need buffer zones for our wilderness areas. Keep our wilderness, wilderness, please. "*

### Mining and Minerals:

This category received the largest number of comments. Those who opposed the withdrawal or expressed support for mining in the area commented on the high mineral potential of the mining district. Some expressed concern that the government, by law, is supposed to encourage, rather than discourage, mineral development. Many of these commentators mentioned that existing laws and regulations are sufficient to regulate mineral exploration and development, as well as provide for mitigation of impacts to other resources and reclamation activities.

*"Current environmental laws are fully capable of operating and arriving at a fair and impartial decision as to whether any proposed mining operations can be done in a responsible and environmentally sound manner."*

*"Any mining operation would have to conform to the regulations of the many agencies looking out for America's environment."*

*"The significant mineral potential of the proposed withdrawal area has been known for many years, and the area has produced minerals with no significant adverse affect to other multiple users or to the integrity of Yellowstone National Park."*

*"Mining activities can be conducted, today, in a manner which eliminates many of the problems of the past and reclaims the land. We have many examples of projects conducted by our members which have actually improved wildlife habitat and restored the land."*

Commentors who supported the mineral withdrawal or opposed mining in the area expressed concerns about the potential effects of mining and mining-related activities on the environment, including the long-term effects on surface and ground water quality, the potential effects to wildlife, and the ineffectiveness of reclamation efforts at these altitudes. The revision of the General Mining Law of 1872 was also addressed by some of the commentors in this category.

*"The environment must be protected from mining and pollution."*

*"Please remember that mining can destroy in years what nature took eons to build, and like Humpty Dumpty it can never be put back together again."*

*"It is about time that we reform the 1872 Mining Law, so you can just get back to doing your job, and not having to do battle with the multinational mining corporations, who have unlimited power and money."*

## **THE PLANNING PROCESS AND THE PROPOSED MINERAL WITHDRAWAL**

### **Planning:**

The "Planning" category of the content analysis focused on comments about forest plans, land uses, compliance with the National Environmental Policy Act (NEPA), and alternatives addressed in the withdrawal process..

*"...the DEIS...lacks a full range of reasonable alternatives. The Withdrawal Team failed to consider other reasonable partial withdrawal alternatives. A real issue identified during scoping was, would a partial withdrawal satisfy the desire to greatly enhance protection afforded Yellowstone National Park."*

*"The criteria outlined in the Forest Plans deserve careful consideration in the final EIS; particularly where the Department proposes to withdraw lands that were considered in the planning process and assigned to a management area that provides for the exploration and development of mineral resources."*

### **Mineral Withdrawal:**

Some comments about the Draft Environmental Impact Statement (EIS) discussed the process of withdrawing federal land from mineral activity. The Presidential moratorium on new mining claims in the area that initiated the withdrawal proposal and the perception of "political interference," in the New World Project generated comments, as did the perceived precedent-setting nature of a withdrawal in such a highly mineralized and historically-mined area. Some commentors expressed doubt that the mineral withdrawal EIS could be unbiased, it was being prepared to "justify" a "political" decision that had already been made by the Administration.

*"The harm it could actualize is that it would set a precedent for withdrawing other highly mineralized areas containing minerals desperately needed by our nation."*

*"This action sets a dangerous precedent whereby areas available for mining and minerals exploration and production are determined bureaucratically rather than on the economic, environmental, and sociological criteria that are established and working elsewhere."*

*"...it is a very unusual DEIS, inverting the usual process, and creating an after-the-fact justification for political interference in what was an on going, and nearly complete, process of environmental review for the New World project. It sets a precedent for a system of "presidential review" of mine projects, since many or most large scale projects require various federal permits. "*

*"...the document has little discussion of the policy behind the decision or the policy implications of a withdrawal. In fact the politics behind the proposed*



*withdrawal is a key element of the proposal and is not discussed at all."*

### **New World Project:**

During the scoping period for the proposed mineral withdrawal, the Administration, Crown Butte Mines, Inc., and the Greater Yellowstone Coalition, announced they had formulated an "Agreement" through which the United States would acquire Crown Butte's interests in the New World Mining District. This action halted development of the controversial New World Project and completion of an environmental impact statement for the mine proposal being prepared by a third-party contractor (funded by Crown Butte Mines, Inc.) for the State of Montana and the Forest Service.

Although the areas are linked by geography, the environmental impact analysis for the New World Project and the environmental impact analysis for the proposed mineral withdrawal have been conducted as separate processes. Many of those who submitted comments on the Draft EIS for the proposed mineral withdrawal, however, did not separate the New World Project (or their thoughts about the mine) and the events surrounding the New World Mine Agreement from the withdrawal.

*"Though this action is independent of the New World Mine Agreement, a decision to withdraw these lands would preclude options for location of the mine tailings pond should the Agreement not be implemented."*

*"I urge the withdrawal as a stand-alone proposition regardless of other swap agreements that may evolve."*

*"I am concerned that the BLM/Forest Service proposal to withdraw 22,000 acres in and around Cooke City from mineral exploration and mining activity may be linked to the deal made between Battle Mountain Gold and the Clinton Administration over the New World Mine and UN's World Heritage Committee recommendation that a 100-mile buffer zone be placed around Yellowstone Park."*

*"...while the New World Mine Agreement and Cooke City Area Mineral Withdrawal are separate entities, they both would afford a great amount of protection from mining impacts to this very special area."*

*"Please look toward future generations by removing this valuable watershed area of public land in conjunction with the BLM New World Mine agreement."*

### **Preferences Expressed in the Comment Letters:**

Of those who commented on the proposed withdrawal, 214 stated support for the proposed withdrawal, 28 stated strong support for the proposal, 75 stated opposition to the withdrawal, 28 stated strong opposition to the proposal, and 46 did not express support or opposition or only submitted technical suggestions.

## **DISTRIBUTION OF THE FINAL ENVIRONMENTAL IMPACT STATEMENT AND SUMMARY**

Copies of the Final EIS/Summary are being sent to nearly 1300 persons; groups; Tribes; State, County, and local governments, and agencies that have expressed an interest in the project. The mailing list has been compiled using the names and addresses from the following sources:

- Parties who requested to have their names placed on the mailing list for the project;
- Parties who have participated at meetings and/or who have submitted written comments to date in the process;
- Indian Tribes
- Federal and State agencies consulted during the preparation of the EIS; and
- Other Federal, State, and local (to the study area) entities potentially affected by the proposed withdrawal.

Copies of the Final EIS will also be made available for public review at the locations listed on page 42 of this document.





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